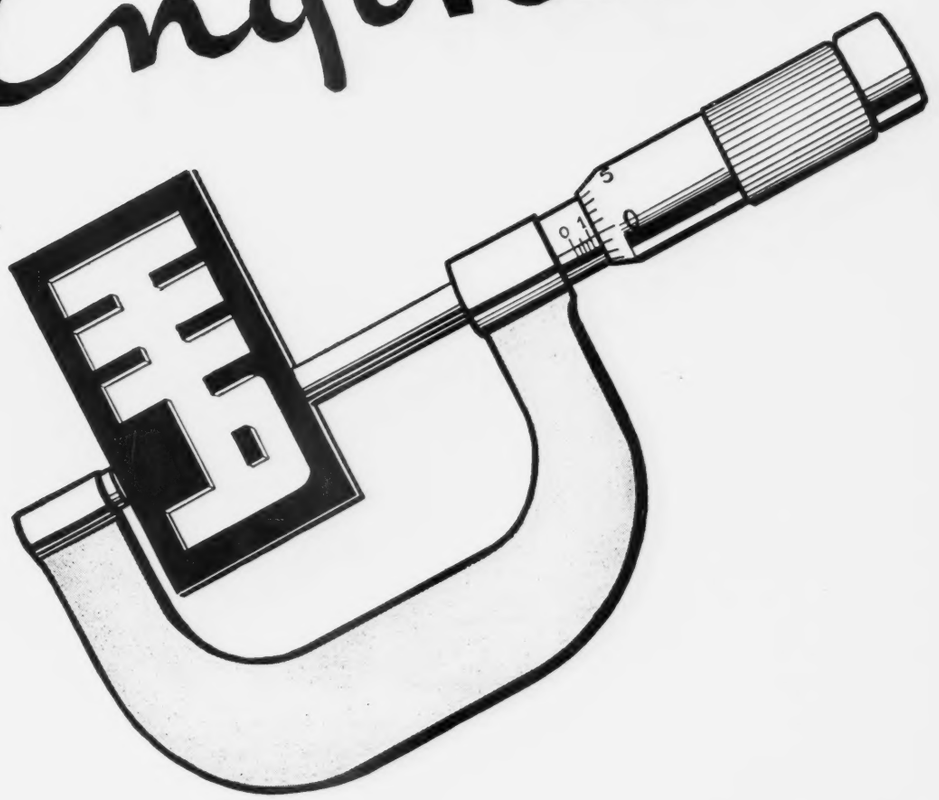
Printing Equipment Engineer



APRIL, 1941

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

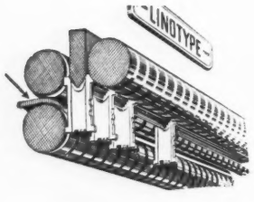
CONFIDENCE

Owners and operators know that back of every Blue Streak Linotype is the assurance of 55 years of dependability. They know that Linotype is the pace-maker—as it constantly has been—the trail blazer toward new peaks of composing room efficiency.

Speedy, uncomplicated operation and simple maintenance characterize Blue Streak Linotypes. Linotypes produce a maximum of slugs per day with a minimum of human effort, simply and economically.

Ask your Linotype representative about the many exclusive Linotype features that assure dependable, economical production.

TRADE LINOTYPE MARK



Automatic Matrix Guard

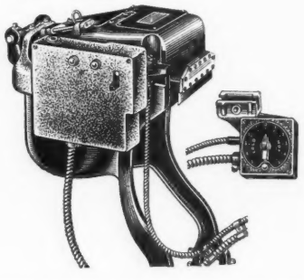
Impossible to shift if matrices are on the distributor. The feeler bar moves out before each shift. If it touches matrices, it stops the shift and thus prevents "wrong fonts." This automatic "safety" action relieves the operator of distributor worry. Nothing to remember—*nothing to watch except the copy.*

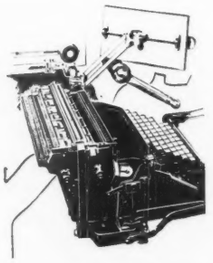
One-Turn Shift

1½ seconds magazine to magazine. Fastest, simplest method of shifting magazines. Counterbalanced elevating shaft makes action effortless. Stationary channel entrances and simple mechanical design reduce complications in maintenance and operation. Simplest, easiest, fastest!

Linotype Micro-Therm

The exclusive Linotype heat control that minimizes maintenance, simplifies operation. Now the mouthpiece control is entirely automatic. The control switches are actuated by a temperature change of 2°. Simple to maintain, easy to operate, accurate and dependable.

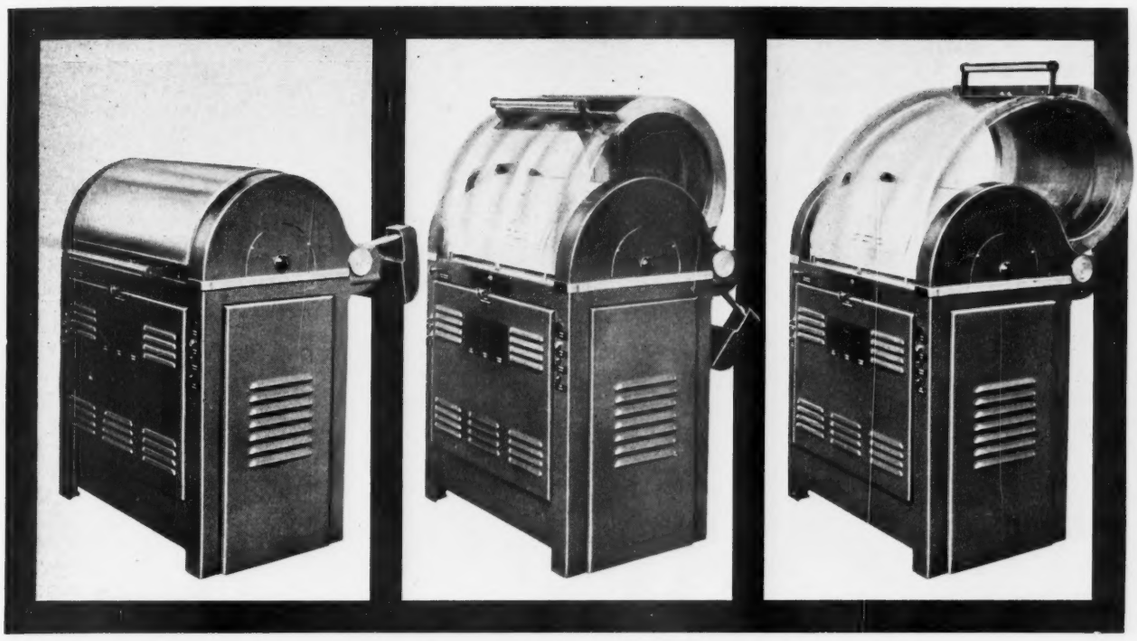




Swinging Keyboard

Every part of the keyboard is immediately available, cutting cleaning time in half. Future sagging and faulty operation are eliminated by the support of the keyboard at both ends. Takes less than 10 seconds to swing it out or swing it back.

A-P-L Poster Bodoni Compressed, Linotype Baskerville Bold, and Poster Bodoni Italic.



3 of a Kind

With Action, Plus Quality-Production!

That's what STA-HI MASTER FORMER effects in both the Stereotype and the Press Rooms, reflecting an attractive and Better-Looking Newspaper at LOWER PRODUCTION COSTS!

STA-HI CORPORATION
1020 Crocker Street
Los Angeles, California

TRENDS *in newspaper design, engraving and presswork analyzed —*

By DOUGLAS C. McMURTRIE

I.

I WOULD like to explain that the papers are scored on the basis of 20 points for head typography, 20 points for text typography, 20 points for merit of advertising typography, 20 points for general makeup and attractiveness, and 20 points for presswork. It thus becomes evident that when we appraise these different physical features of a newspaper, bad rating on one feature will spoil a high rating on another. So in order to win an award a paper must really have a good score on each one of these features, a really poor score on any one of them being highly prejudicial to the final rating.

I consider physical appearance of newspapers a tremendously important feature. Competition comes not so much from other papers or publications as from a variety of attractions in the community. In the face of competition of one kind or another, it is absolutely necessary to present editorial and commercial news in a way so convenient to the reader and so easy to read, that reading will not be a chore. For when reading becomes a chore the average person nowadays will find something else to occupy his time.

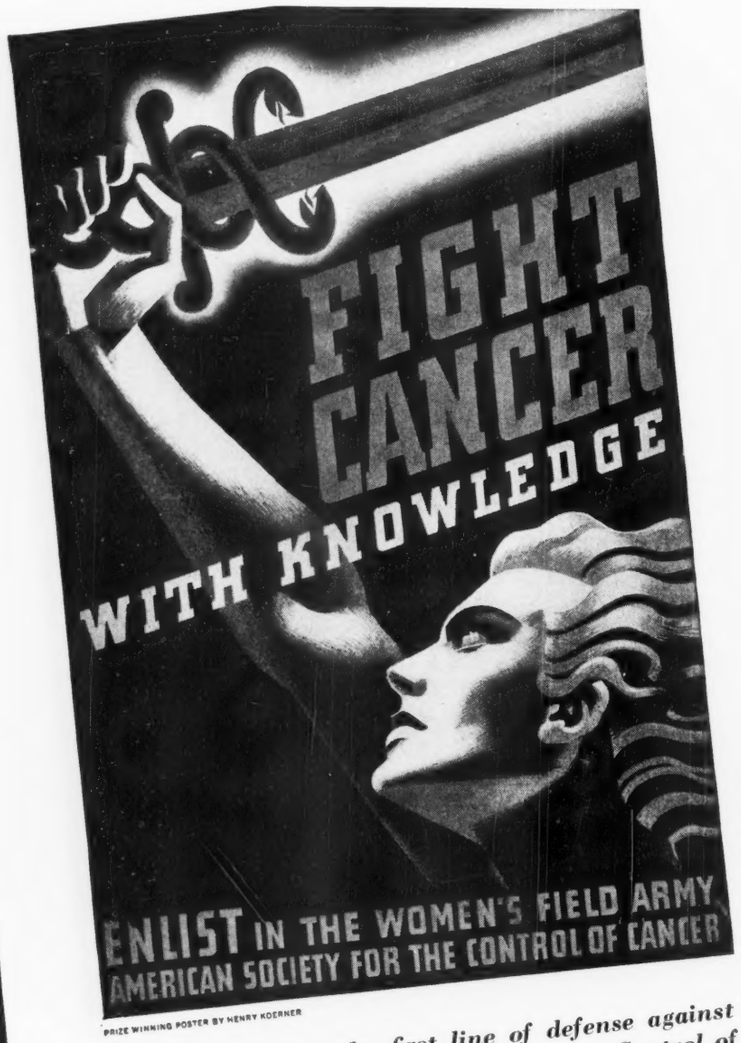
The physical presentations of news and editorial matter and advertising play an important role in determining whether or not that material is going to get read in a busy and fast-moving world. Anything we can do to make for quick comprehension and to enable people to "read as they run," makes for an increase in newspaper influence and — inevitably — for an increase in newspaper prosperity.

Every newspaper that makes a serious effort to improve its physical appearance records some very definite commercial gain from that improvement.

In judging the entries, the first thing we have considered is head typography. One of the first disqualifications in judging these papers is to eliminate newspapers which persist in sticking to all-cap heads. The many good papers which have adopted upper and lower case heads are so infinitely more readable and convenient to the reader, and read so much faster in point of time, that they are the only ones which stand any chance today in an intelligently-judged contest.

(*Continued on Page 40*)

Editor's Note — Accompanying abstract is from an address by Douglas C. McMurtrie who reported for the committee of judges in the second annual contest for typographical excellence at the February meeting of the Inland Daily Press Association. This abstract while it explains how the committee arrived at its decisions, also explains modern newspaper typographical design. The speaker discusses newspaper streamlining, how to make up pages for readability, desirability for good printing, and other pertinent trends which make it possible for the customer to "read as he runs."



PRIZE WINNING POSTER BY HENRY KOERNER

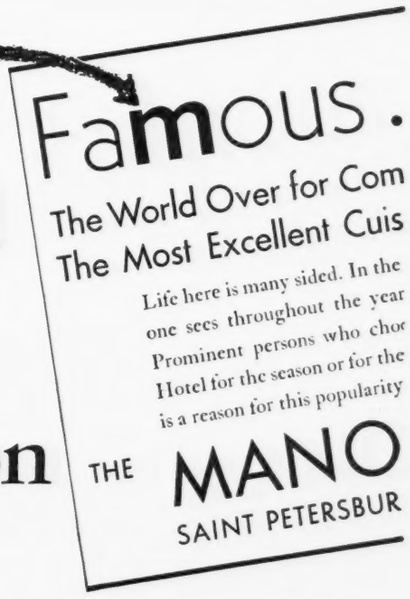
Early diagnosis is the first line of defense against cancer. Help the American Society for the Control of Cancer in its educational program. Enlist in the local unit of the Women's Field Army. Annual enlistment fee $1.00. Use the American Society for the Control of Cancer labels on your packages.

If a resident of New York City or the Metropolitan area, address New York City Cancer Committee, 130 East 66th Street. Package labels and the Quarterly Review will be sent to you for your dollar.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER

350 Madison Avenue . New York, N. Y.

Why wf is marked so seldom on proofs of Ludlow composition


Famous.
The World Over for Com
The Most Excellent Cuis
Life here is many sided. In the
one sees throughout the year
Prominent persons who choo
Hotel for the season or for the
is a reason for this popularity
THE MANO
SAINT PETERSBUR

Every printer knows that a "dirty" case, into the boxes of which wrong types have been distributed, is almost universally responsible for "wrong fonts" which show up in composition. The Ludlow system of matrix handling and storage makes it almost impossible to distribute matrices into the wrong case. Hence "wrong font" is a rare mark on proofs of Ludlow-set composition.

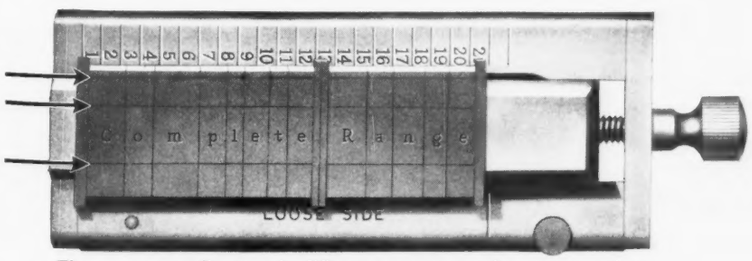
• With the Ludlow system, the matrices are distributed back immediately into the still-open case as soon as the line has been set and cast—so that the likelihood of matrices ever getting into the wrong case is obviously quite negligible.

• A great majority of "wrong fonts," being due to faulty distribution, are therefore prevented at their source.

• As shown in the illustration below, each face and point-size is marked by horizontal lines on the back of Ludlow matrices, these short lines forming longer straight lines. If a matrix from the wrong font should get into the stick, these straight lines are broken—which can hardly escape the attention of the compositor as he is spacing the line of matrices, *before* the slugline is cast.

• The prevention of "wrong fonts" means fewer errors in Ludlow composition. This is only one of the many reasons why Ludlow composition costs less to produce.

• Write today for full information regarding all the advantages of operating with Ludlow equipment.



The upper cross-lines are in different arrangement for every typeface; the lower cross-line is in different position for every pointsize. Thus "wrong font" is clearly shown by any variation in cross-line alignment.

LUDLOW TYPOGRAPH COMPANY

•

2032 Clybourn Avenue, Chicago, Ill.

Set in Ludlow Garamond Bold

Champion Kromekote *

The bright and shimmering surface of this exclusive Champion product adds new life and charm to printed pieces. Although having such high finish, Kromekote has a remarkable affinity for ink, and prints easily. Transparent and semi-transparent inks permit retention of the all-over gloss surface of the sheet itself. Printers everywhere are finding new and different uses for all Kromekote grades. In addition to box wrap for the very finest packages, Kromekote is widely employed for unusual effects in labels, menus, programs, invitations, and greeting cards. There is only one Kromekote, and nothing else even compares with it. You're sure to find Kromekote a remarkable paper for remarkable effects! Try it on the next job you want to dress up in better than Sunday best!

Kromekote Box Paper, in white and 13 colors; carried in 26″ rolls, three reams 26 x 20 to the roll; white and ivory in weights 27, 30, and 33 lb.; colors 30 lb. only. Kromekote Litho, white only, 25 x 38, 28 x 44—50 and 60 lb. Kromekote Label, 20 x 26—30 lb., white and nine colors. Kromekote Postcard, white only, 22½ x 28½—.012. Kromekote Cover, white only, 20 x 26, 23 x 35—.010. (*All grades C.1 S. only*).

*Kromekote is the registered trade-mark for The Champion Paper and Fibre Company's cast coated high finish paper.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

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- **TIPS ON PRESSWORK — By G. C. Cooper.** This pocket size book measures 3½ in. by 5½ in. and contains 111 printed pages, heavy paper cover. Covers standard practices on cylinder and platen presses. Price $1.50, cash with order.
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- **THE PRACTICE OF PRESSWORK — By Craig R. Spicher.** We offer copies to our readers, at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).

• ***Send All Orders With Remittance to***

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

Printing Equipment Engineer

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APRIL 1941

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Member Controlled CCA Circulation Audit

HUBER **VELO** COLD SET INK

AND PRINTING PROCESS

(REG. U. S. PAT. OFF.)

FOR PUBLISHERS STRIVING FOR A BETTER PRINTED PAPER WITH WHICH TO ATTRACT MORE READERS AND ADVERTISERS

WHAT WILL ADVERTISERS LIKE ABOUT VELO PRINTING?

Principally the increased selling power of their advertisements created by vastly improved picturization of their products, and by the greater legibility of their copy. Furthermore, both second-impression offset and strike-through are eliminated.

WILL ADVERTISERS GIVE PREFERENCE TO PAPERS USING VELO?

Definitely yes. A recent survey of the largest department stores, specialty shops, national advertisers, and advertising agencies in New York to whom comparative pages of Velo and regular newspaper printing were shown indicates that every one considers Velo ink a premium product. 80% definitely committed themselves that they would give preference to, and increase their linage, in newspapers using Velo.

We would be glad to show you this survey in answer to your inquiry.

WHAT WILL READERS LIKE ABOUT VELO?

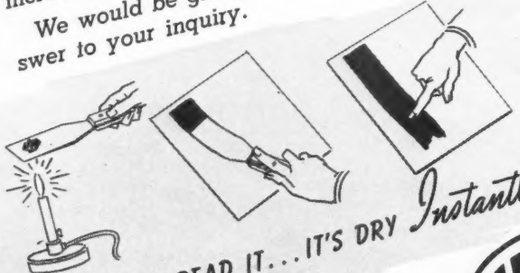
Ease of reading and improved reproduction of pictures, above everything else. Small type especially becomes noticeably more legible. There are no fuzzy letters, no filled-in loops and there is a clean, pleasing appearance to the entire page. Readers also like the fact that Velo ink does not rub off and soil their fingers.

WHAT EXPLAINS THE SUPERIORITY OF VELO PRINTING?

The fact that Velo is the *natural* printing process. Huber Velo Cold Set Ink in its natural state at ordinary temperatures is already the solid that other inks approach as they dry. By the application of low-temperature heat to a limited portion of the press the solid ink is made fluid . . . only to solidify again instantly upon touching the cool (room temperature) paper. So *instantaneously* does this "cold set" solidify the ink that there is no penetration of ink into the paper—even newsprint. All the ink stays on the surface, producing the sharpness and brilliance of high-grade magazine printing.

The Velo Process will permit newspapers to print two- to four-color process advertising back to back on both first and second impressions without offset.

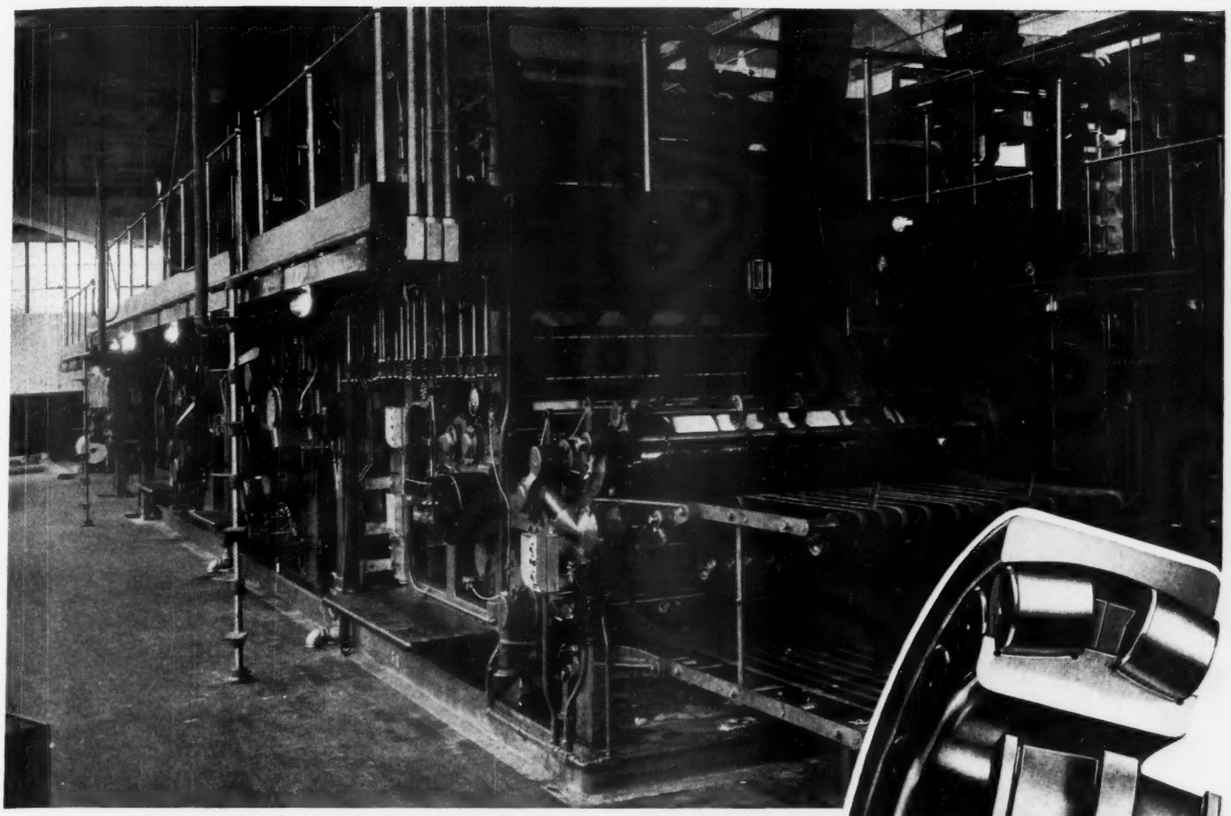
The process is now being used regularly in the production of commercial magazine and newspaper work. An investigation of Velo would be worth your while. Write to J. M. HUBER, INC., New York, Chicago, St. Louis, Boston.



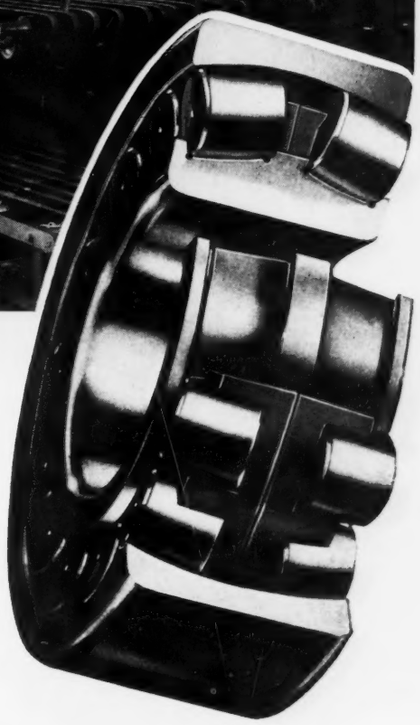
HEAT IT . . . SPREAD IT . . . IT'S DRY *Instantly*

HUBER INKS

THE INKS OF THE AYER AWARD WINNERS



BUILT BY R. HOE & CO., INC., *this and similar Hoe Magazine Presses are used in the production of "Life", "Time", "New Yorker", "Esquire", "Better Homes & Gardens", "Glamour", "Nation's Business", "Scientific American", "Nature" and "Grade Teacher".*



"Let Them Roll"

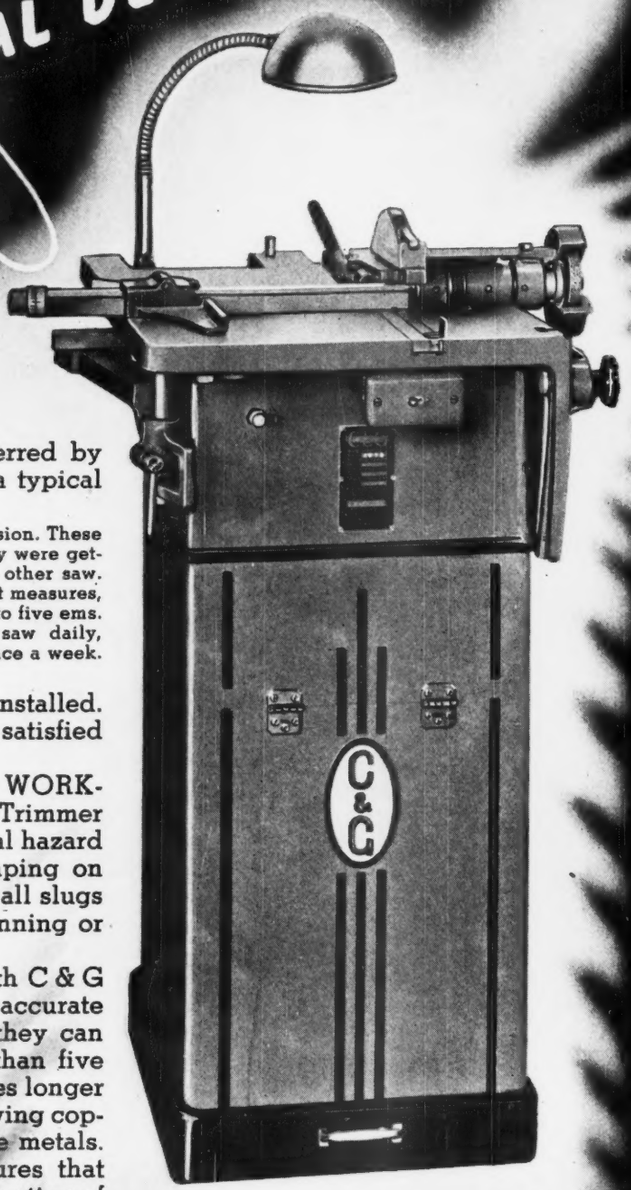
ON SKF BEARINGS

The forms are in place. The power is turned on. And the main cylinders on this press roll in unison on SKF Spherical Bearings. And they move swiftly, smoothly and certainly because SKF's, with their built-in alignment, low friction, high accuracy and minimum lubrication requirements, have the knack of keeping them in correct alignment . . . ALWAYS. Chances are the presses used to print this magazine are SKF-equipped, too. 4785

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

ROLLER SKF BEARINGS

"The men working on the saws made the FINAL DECISION..."



C & G Deluxe Saw Trimmers ARE preferred by men who use saws. Here is the story of a typical experience---in a side-by-side test:

"The men working on the saws made the final decision. These men all work on a bonus system. They found that they were getting more out of the C & G than they were out of the other saw. Also, that the C & G was more accurate on cutting short measures, which they do in large quantities, anywhere from two to five ems.

"The men were changing blades on the other saw daily, while on the C & G they changed the blades only once a week. This part they liked very much."

Two C & G Deluxe Saw Trimmers were installed. The "greater production" will mean better satisfied workmen and lower costs.

The safety factor of the POSITIVE WORK-HOLDER on the C & G Deluxe Saw Trimmer speeds up operation by eliminating mental hazard when cutting short measures---safe clamping on production down to eight points. In turn, all slugs are the same length. There can be no fanning or buckling of slugs while sawing.

Universal Saw Blades are exclusive with C & G Saw Trimmers. Their use tends to more accurate cut, and with the grinding attachment, they can be sharpened right on the saw in less than five minutes. They stay sharp three to five times longer than ordinary blades, and are used for sawing copper, brass, zinc, and wood, as well as type metals.

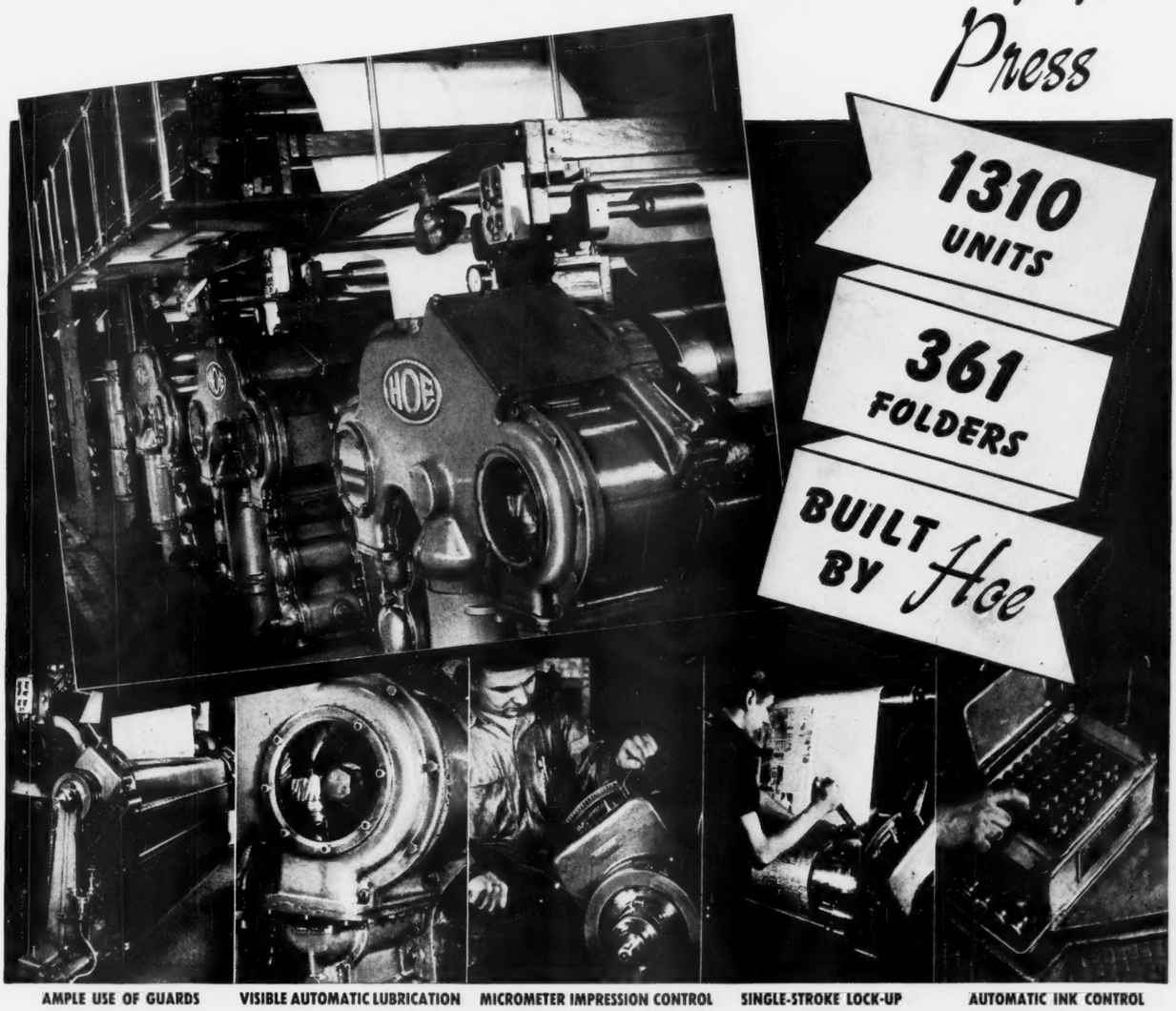
There are many other exclusive features that make C & G Deluxe Saw Trimmers the selection of leading printers and publishers everywhere. Complete information will be sent upon request---without obligation to you. Write today.

C & G DELUXE MODEL 3-A SAW TRIMMER

MILWAUKEE SAW TRIMMER CORP.

610 EAST CLYBOURN STREET MILWAUKEE, WISCONSIN

The Record of THE ORIGINAL ANTI-FRICTION BEARING *Newspaper Press*



AMPLE USE OF GUARDS | VISIBLE AUTOMATIC LUBRICATION | MICROMETER IMPRESSION CONTROL | SINGLE-STROKE LOCK-UP | AUTOMATIC INK CONTROL

Here's a Hoe record that began when all the world was skeptical of the application of anti-friction bearings to newspaper presses. It is the result of a pioneering effort by Hoe Engineers who foresaw in the development of the anti-friction bearing press the possibility of reaching the higher press speeds which are prevalent today. Since then, this original conviction has been amply substantiated. After the anti-friction bearing press ushered in the modern era of super-production, it was universally adopted as standard construction for all modern newspaper presses.

Between the time of the original pioneering effort and the present day, Hoe has built 1,310 units equipped with anti-friction bearings for black newspaper presses alone. The total is even higher when you add multi-color newspaper presses, rotogravure presses, magazine and offset presses. When they are included, Hoe has built the impressive total of 1,588 anti-friction press units or printing couples.

The anti-friction bearing press, though outstanding, is only one mechanical improvement pioneered by Hoe. A few of the others, from a list of hundreds that contribute to the high standards of present-day production, are illustrated.

This Hoe experience and background should have great significance for the mechanical executive who is planning pressroom expansion during 1941.

R. HOE & CO., INC.

General Offices: **910 EAST 138th *(At East River)* NEW YORK, N. Y.**

BOSTON **CHICAGO** **SAN FRANCISCO** **BIRMINGHAM**

IN ACTUAL USE FOR OVER 2 YEARS—

"HYDRY"

Odorless, Quick Drying

INKS

have demonstrated their unequalled advantages for

PACKAGE PRINTING

and here are some of those advantages:—

1. "HYDRY" inks are absolutely odorless.
2. They dry so quickly that offset is reduced to a new minimum.
3. With "HYDRY", bread-wrappers can be printed, waxed, rewound and shipped in a very few hours.
4. Paper milk bottles, butter cartons and similar packages can be printed, die cut, stripped and glued in a continuous high speed operation.
5. "HYDRY" inks provide a new brilliance and cleanness of color unequalled by conventional inks.
6. They can be made non-rub and non-scratch.
7. They are non-skinning and will remain open on the press for long periods of time.
8. With the "HYDRY" process their use improves the strength, folding, and in the case of bread-wrappers, the sealing qualities of printed stock.
9. Greater mileage is obtained due to thinner, non-penetrating films with comparable brilliance.
10. They will not injure rubber plates in any way.

Little Alteration of Equipment Necessary

Only two changes of regular press equipment are necessary for the use of "HYDRY" inks, (1) A simple inexpensive steam applicator which we can supply or you can build yourself according to our designs; (2) The use of rubber or synthetic rubber rollers throughout instead of composition rollers. Since "HYDRY" inks have no deleterious effects on rubber rollers, their life is much greater than that of composition rollers, providing a saving which more than pays for the difference in cost.

More than Two Years of Testing

"HYDRY" is a completely new type of printing ink and drying process fully covered by a series of U. S. Patents granted and pending, and was developed by Michigan Research Laboratories, Inc. They were first announced to the trade on February 17, 1941, after more than two years of commercial use in selected types of printing plants throughout the country. These two years of testing have demonstrated beyond question the amazing advantages of "HYDRY" inks for the specialty printer of bread-wrappers, paper milk bottles, food containers, etc. They are not, however, designed for the commercial printer and are in their present form not recommended for that use, although from our tests there is a great possibility that these inks will provide the answer to many of the difficulties encountered with the excessive heat used in fast drying web printing.

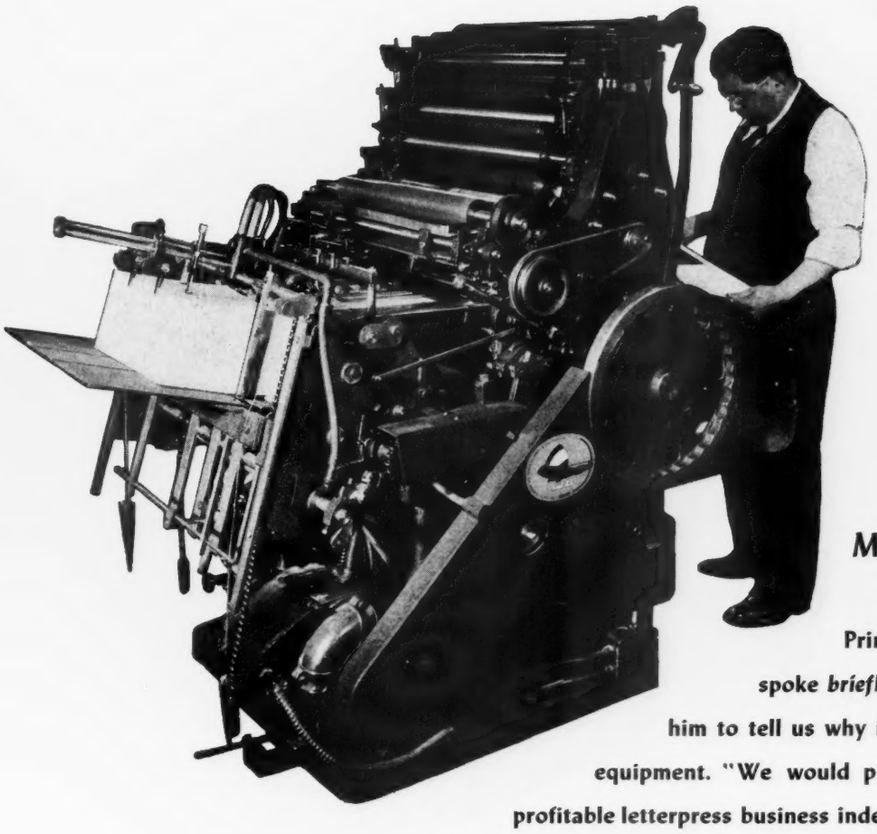
Write today for full information about

"HYDRY" INKS

Manufactured under license by

E. J. KELLY COMPANY, 1839 N. Pitcher Street, Kalamazoo, Michigan

"We're now keeping all that profitable *Extra business at home"*



Another progressive letterpress printer installs modern ATF-Webendorfer Offset Equipment

Mr. Harold J. Hersinger, **President of Alexander Hamilton Printing Company of Paterson, N. J., spoke *briefly* and *to-the-point* when we asked him to tell us why he added offset to his letterpress equipment. "We would probably have continued doing a profitable letterpress business indefinitely," said Mr. Hersinger, "but we could see no reason for letting a large and growing quantity of business which offset has created *go out-of-town*. So we installed a new 17x22 ATF-Webendorfer Offset Press, together with an ATF Camera and complete plate-making equipment. With our combination shop we can now serve our customers better, and we keep a growing volume of profitable offset business *right here where it belongs."* • Do Mr. Hersinger's words "hit home" in your set-up? Then get complete information on simple, efficient ATF-Webendorfer Offset equipment. You'll be pleasantly surprised how little it will cost you to install modern efficient offset equipment in your present letterpress plant. Consult your nearest ATF Branch, or Dealer, today.**

Types used:
Lydian Bold
Lydian Cursive
News Gothic Cond.

ATF
AMERICAN TYPE FOUNDERS

200 ELMORA AVE., ELIZABETH, NEW JERSEY • *Branches and Agents Everywhere*

IT'S AN *Old Story* WITH YOU.

Every executive working on a newspaper, a magazine or in a commercial printing plant knows the old story that "The success of that newspaper, magazine or printing plant is dependent upon the returns of advertising." Advertising, therefore, is the plant's life blood.

PRINTING EQUIPMENT Engineer is no exception to the rule. Our success depends upon your response to our advertisers' printed messages. Their advertisements in the 1941 Equipment and Supplies Catalog are influencing the purchase of thousands of dollars worth of equipment. Frequently, however, mechanical executives look up data on equipment and supplies in the Catalog, pass on the information to the front office and equipment is purchased without the name of PRINTING EQUIPMENT Engineer entering into the picture.

We want our advertisers to know you have seen their advertising in this Catalog. This is why we will appreciate it if you will send the information-wanted post card in the Catalog to us for forwarding to the manufacturers. This service saves you time and money. On the other hand, when answering advertisements direct to the manufacturer, please mention the 1941 Printing Equipment Catalog. These little courtesies on your part mean a lot to us and we will appreciate it no end.

If it's Printing Equipment and Supplies . . . you'll find it in

THE SEVENTH ANNUAL EDITION OF

THE PRINTING EQUIPMENT CATALOG

To Newspaper Pressmen who are having blanket trouble

Whether your trouble is unsatisfactory presswork or too-high blanket costs . . . or if it is due to bolstering, ghosting, or other faults directly traceable to your blankets . . . you will find your answer in Vulcan's BALANCED cylinder packing. This non-rubber, non-felt combination . . . No. 67 oil-proof top blanket* and No. 76 cork underpacking . . . is as near to being a cure-all as has ever been developed. It is a reasonably HARD packing . . . that's what promotes improved presswork (especially pictures); and it has the necessary RESILIENCE to compensate for normal surface variations in your plates. Write for details and recommendations.

*Originated, manufactured, patented, and distributed exclusively by the Vulcan Proofing Company.

VULCAN PROOFING COMPANY · First Ave. and Fifty-Eighth St., Brooklyn, N. Y.

SALES REPRESENTATIVES IN PRINCIPAL CITIES

VULCAN

PRESS BLANKETS

Newspaper Press Blankets—Offset Blankets—Non-Rubber Inking Rollers for Newspapers, Commercial Letterpress Printers, and Offset Printers

Why Experienced Pressmen Prefer BRYANT PAPERS

Practical pressmen say that they prefer Bryant Papers because they have a superior surface and color and what's more, they give

MORE ECONOMICAL PRODUCTION

YES, it's true. Bryant Papers do have a finer surface and a strong tenacious coating which make for economical production. This finer surface eliminates the necessity for cutting inks, reduces the drying time on the job and practically eliminates offset and smudging. These in turn, of course, save time on the job.

There is another important advantage of the finer surfaces of Bryant Papers and that is they give uniform press work throughout the run. You don't have to stop the press for doctoring in the middle of a run when you use this better stock.

These advantages have been proved by countless pressroom executives. You, too, can take advantage of them. When you are consulted about paper stock for a particular job, urge the use of Bryant Papers. You and your front office will be pleased with the economical production you will get and the customer will be satisfied with the quality of the job.

Bryant Coated Papers

Bry-Fold
Imperial
Cellugloss
Pliable
Milham Enamel
Milham Offset Enamel
Sunray
Sunray CLS Litho
Brycoat

Bryant Uncoated Papers

De Soto English Finish
De Soto Super
British Opaque
Bryantique
Milham English Finish
Milham Super
Sunbeam English Finish
Sunbeam Super
Bryanteer English Finish

FINE PAPERS FOR FINE PRINTING

BRYANT PAPER COMPANY

Paper for Letterpress, Lithography and Rotogravure

KALAMAZOO, MICHIGAN

Sales Offices: **CHICAGO—CINCINNATI—NEW YORK**

In Addition to Doing a Large Part in the National Defense Program, Our Facilities Still Enable Us to Produce Many

DUPLEX UNITUBULAR

PRESSES as well as other

DUPLEX EQUIPMENT

Some Recent Sales and Deliveries of Unitubulars Are—

NEW UNITUBULAR PRESSES:

Rotary Color Print, *San Francisco, California*
Everybody's Daily Pub. Co., *Buffalo, New York*
Cleveland Shopping News, *Cleveland, Ohio*
Herbick & Held Printing Co., *Pittsburgh, Pennsylvania*
Mercury Press, *Washington, D. C.*
Guardian, *Trinidad, B. W. I.*
News Dispatch, *Shamokin, Pennsylvania*
Republican Herald, *Winona, Minnesota*

RE-ORDERS FOR UNITUBULAR UNITS

Cleveland Shopping News, *Cleveland, Ohio*
Herbick & Held Printing Co., *Pittsburgh, Pennsylvania*
Waltham Pub. Co., *Waltham, Massachusetts*
Billings Gazette, *Billings, Montana*
Kansas Color Press, *Lawrence, Kansas*
La Esfera, *Caracas, Venezuela*
Capital Journal, *Salem, Oregon*

Contact Our Representatives in Attendance at the A.N.P.A. Convention
For Further Information, or Write Direct to

THE DUPLEX PRINTING PRESS CO.

BATTLE CREEK, MICHIGAN

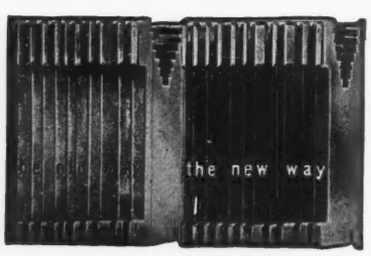
Black & White Contrast

prevents eyestrain

"Why don't you tell 'em the BEST feature of contrast reference marks?" said one of our customers recently.

"You keep on proving that matrix contrast prevents errors, which we all admit. Why not point out that it also *prevents eyestrain?* That's the main reason why we buy it."

So we hasten to point out, as our correspondent suggests, that contrast reference marks on Linotype and Intertype matrices do indeed prevent eyestrain. That is why this service has been officially endorsed by the I. T. U. Less eyestrain means less fatigue, and less fatigue means more production. Any way you look at it, therefore, Matrix Contrast Service pays big dividends . . . *Write for Booklet.*



MATRIX CONTRAST CORPORATION

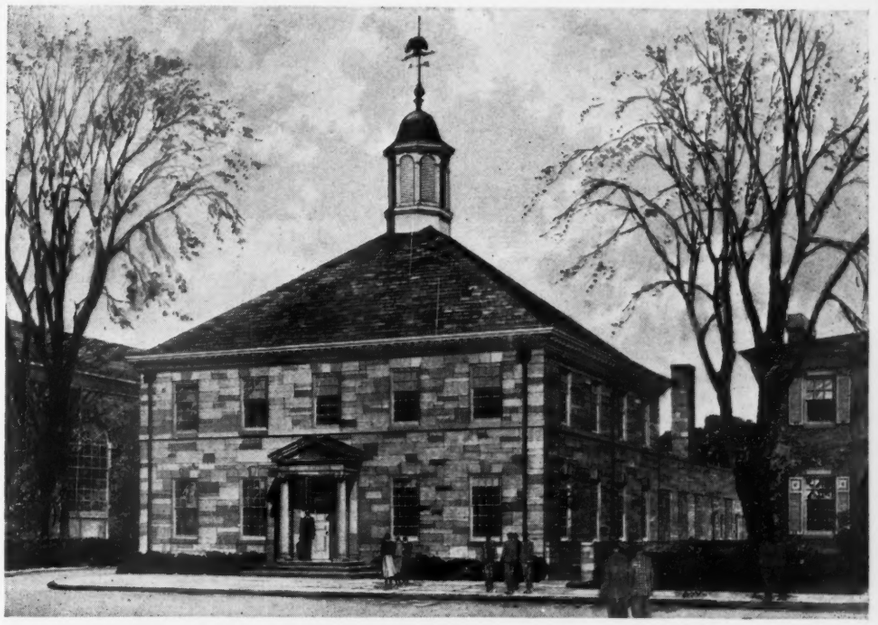
Sole Licensees of the Percy L. Hill Matrix Contrast Patents Nos. 1,466,437 and 1,796,023

EMPIRE STATE BUILDING, NEW YORK

European Agents: Funditor, Ltd., 3, Woodbridge Street, Clerkenwell Green, London, E. C. 1

Black & White

MATRIX CONTRAST SERVICE



Replica of first capitol building houses Chillicothe (O.) Newspapers. Exterior is Briar Hill stone with shot-sawed finish. Interior is air-conditioned.

New Home for three Ohio newspapers completed — Editorial and business offices beautifully appointed — Production departments fitted with modern aids to production

By STAFF WRITER

FOR the Chillicothe, Ohio newspapers, which recently moved into a new building, the days when the rumble and roar of the press resounded throughout the edifice are gone. Also vanished are the difficulties of proper lighting of the composing room and illumination of the interior of the press, the problem of carrying off fumes and ink mist from the composing machines and the press, respectively; these and many other problems incidental to newspaper publishing have been solved.

What is felt by its executives to be the last word in daily journalism plants is represented by the new home of the Chillicothe *Gazette* (evening), Chillicothe *News-Advertiser* (morning) and *Sunday Gazette and Advertiser*.

The front part of the new edifice is a replica of the first capitol building of the Northwest Territory, which was completed in 1800 — in April of which year the first issue of The Scioto *Gazette* (now Chillicothe *Gazette*) was published. That was three years before Ohio became a state.

One hundred, forty-first anniversary of the Gazette's founding was marked simultaneously on April 6, 1941, with the public opening of the new building.

Any other type of architecture for the newspapers' new home would have been out of place in Ohio's first capital city and in a community so rich in historical background, it was decided by Mr. Merritt C. Speidel, president of Speidel Newspapers, Inc. J. K. Hunter is treasurer and publisher and W. E. Beeler is business manager of the Chillicothe papers.

The front part is built of Briar Hill stone with shot-sawed finish. Quarried in Holmes County, Ohio, it comes from the same vein as the stone used in the original capitol building.

Resembling hand-hewn wood shingles of its forebear, the heavy slate shingles cover the steep roof of the definitely Colonial styled building. A copper-covered cupola surmounts the roof and perched above this is an eagle weather vane.

All the outside air used in the ventilating system is drawn through the louvres of the cupola through a large duct, down into the basement from where it is circulated.

Offices of the publisher, business manager and bookkeeper adjoin the business office at the left, while the west side and to the right of the stairway of the first floor is the long and narrow advertising department, with its conference room in the rear.

The office part of the building has ceilings made of acoust-i-metal, perforated with minute openings to spread heated air in the winter and cooled air in the summer from the two-deck air conditioning system.

Business office lighting fixtures are brass chandeliers, suggestive of colonial influence of the room, and fluorescent fixtures. Woodwork of the first floor is of black walnut. All chairs, desks and other office equipment are of steel, listed as Island base type.

A central master clock operates the four electric clocks in the building. A PBX switchboard in the business office handles all phone calls.

The second floor is reached by a walnut stairway. Behind a lobby at the top

At left is shown likeness of Merritt C. Speidel, President Speidel Newspapers and President of Chillicothe Newspapers. At right: Publisher J. K. Hunter of Chillicothe Newspapers.

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

PRINTING ROLLER MAN — Wanted by Eastern publishing house. Synthetic rubber roller manufacturing and compounding experience is essential; experience in practical application of such rollers to high-speed web presses desirable. Give full details about nature of experience, personal data and education, and attach photograph. Reply Box 126.

STEREOTYPER — Wants position to gain further experience in more advanced forms of stereotyping. Experienced Duplex flat-bed pressman-stereotyper. Age 30, married. Reply Box 125.

MACHINIST-FOREMAN — Machinist, Linotype, Ludlow, Elrod, auxiliary equipment; electrician; general plant structure, layout, maintenance. Twenty years experience covering production, coordination, maintenance, composing room, pressroom, engraving. Experienced foreman newspapers, job shops, combinations. University trained industrial organization, management. Young man, union. Reply box 124.

Harris Impressions

Printed in black and red, four pages, letterhead size, Harris-Seybold-Potter Company has published the first issue of *Harris Impressions*. The lead article by Vice President Harry A. Porter is entitled *Business Forecast for 1941*. Another front-page article is from Chairman of the Board A. F. Harris. Most of the content, however, is of a technical-production nature. It is stated in the editorial column that "... it will be our purpose to give factual support to the practical advantages of offset and to clarify the often misunderstood phases of its operation in the pressroom."

of the stairs lies the city room with desks in the front half for the editorial staff of the evening *Gazette* and desks in the rear portion for the editorial staff of the morning *News-Advertiser*.

Editorial Offices

The east side of the second floor is comprised of, first, the office of the newspapers' managing editor, Howard C. Oyer, followed by the teletype room housing Associated Press machines for the *Gazette* and United Press machines for the *News-Advertiser* and the *Sunday Gazette and Advertiser*.

To the rear of this room is the "morgue", with wall shelves for recent issues of newspapers and cabinets for pictures, cuts and mats of local, national and international figures.

By three means of communication, the editorial department saves time and steps: (1) the voice intercommunication system connected to the publisher's and business manager's offices, advertising department, editorial department, engraving plant and composing room; (2) the pneumatic tube which carries copy to the composing room; (3) the small elevator that handles pictures and cuts between the editorial department and the composing room and engraving plant.

At the rear west side of the editorial floor is the suite of offices of Mr. Speidel. These rooms and the first-floor office of the publisher, Mr. Hunter, are the only ones furnished with carpets, wood furniture and drapes.

In the office windows, editorial, business and executive, are cream colored venetian shades. The floors of the first and second stories are of asphalt tile in 9 in. alternating brown and maroon marble design.

Production Departments

The rear of the building, which houses the production departments, is a one-story brick structure so built that an additional floor may be added without additional reinforcement.

A door from the business office leads to the composing room, of which Harry Roose is superintendent. Along the north and east walls in an L-shape are arranged four of the department's six type-setting machines — 4 Linotypes and 2 Intertypes.

At the entrance, where now sets the proofreader's desk, and also at the other end of the "L", provisions have been made for two additional machines in consideration of possible future expansion.

To the right of the "L" and on the west side of the composing room is a Model 14 2-in-1 Linotype, used for editorial heads of both papers. Next to it is an Intertype Mixer G-sm, used for setting body type of advertisements.

Near these two machines are magazine racks, a machinist's table, the superintendent's desk and the national advertising file. Next to the Mixer G-sm is the ad marker's desk and back of it is the ad alley.

Behind the ad alley are the Elrod and material rack.

"Nothing has been overlooked in providing eyesight comfort and necessity for the least amount of walking around for the printers", asserts Superintendent Roose.

Glare Prevented

The glass brick windows are of two types to prevent glare so commonly found in glass brick plants. Up to a 6 ft. height, the glass bricks reflect light downward — above this line, light is reflected straight into the room.

The composing room and stereotype and press room have a ceiling made of an acoustical material which is formed of pressed sugar cane fibers. The floors of both are made of end-grain fir wood block.

The arrangement of the composing room is such that the machine operators need only to turn around to dump their type on the tables. Paralleling the dump tables to the south are the makeup tables where the pages are assembled.

The advertising and editorial setting divisions of the composing room each

(*Continued on Page 38*)

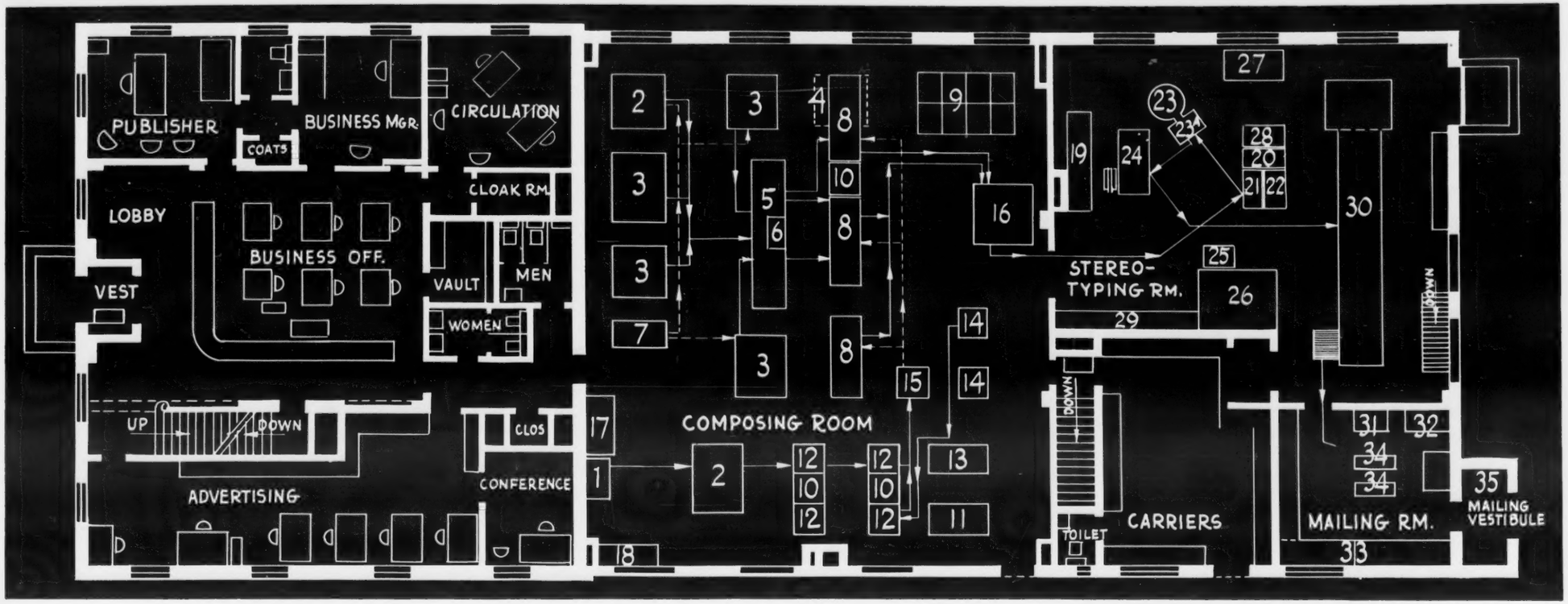
Mechanical and Production Executives of Chillicothe (*O.*) Gazette (*evening*) *and* News-Advertiser (*morning*).

Harry Roose, Mechanical Superintendent.

Gilbert H. Chapman, Press and Stereotype Superintendent.

Edward M. Griesheimer, Gazette *Mechanical Foreman.*

William O. Francis, News-Advertiser *Mechanical Foreman.*



FIRST FLOOR PLAN IN NEW HOME OF CHILLICOTHE (OHIO) *GAZETTE* AND *NEWS-ADVERTISER*

Equipment is placed as shown in the chart above. Work flow indicated by arrowed lines from receipt of editorial copy by Lamson tube system, and ad copy from foreman's desk, to makeup tables, stereo mat rolling machine, plate-making in stereo department, to the press and finally into the mailing room where completed papers are sent on their way. Locker and shower facilities for employees in basement.

Composing Room:

1—Foreman's desk
2—Intertype G-sm Mixer in ad alley and Model C in news room.
3—Linotypes, Models 8 and 14 and a 2-in-1 machine.
4—Space for future line-composing machine.
5—News dump.
6—News proof press.
7—Proof reader and Lamson tube station from editorial offices on floor above.
8—Makeup tables.
9—Form trucks.
10—Saws.
11—Elrod rule, lead, slug and base machine.
12—Ad stones.
13—Material storage.
14—Type cabinets.
15—Ad alley proof press.
16—Stereotype mat roller with mat humidor above.
17—National advertising file.
18—Composing room machinist's bench.

Stereotype Department:

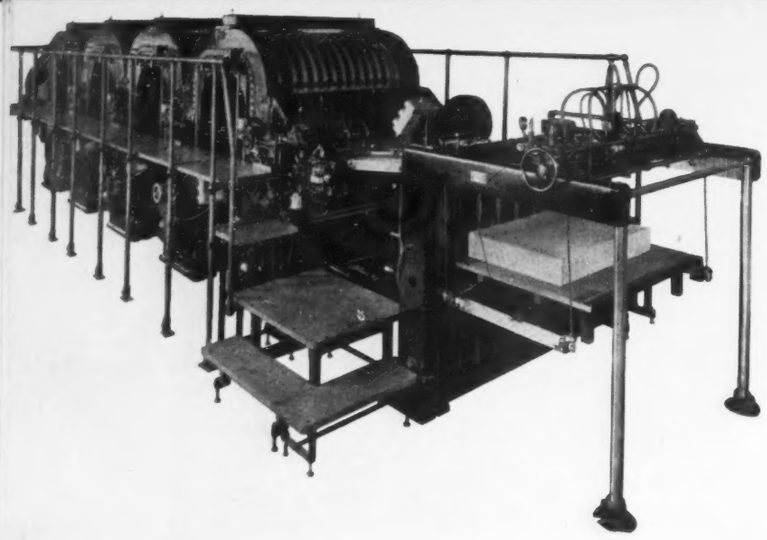
16—Stereotype mat roller with mat humidor above.
19—Line-casting metal remelting pot.
20—Mat scorcher
21—Mat backing
22—Mat trimmer
23—Stereotype metal pot.
23A—Plate casting.
24—Plate finishing.
25—Plate chipper.
26—Saw and router.
27—Flat cast pot.
28—Flat cast table.
29—Supplies storage.

Pressroom:

30—Duplex 24-page Tubular press.

Mailing Room:

31—Plate machine.
32—Mailing machine.
33—Bundles.
34—Mailing racks.
35—Mailing vestibule.



View of Harris-Seybold - Potter's Unit Type Combination Photo-gravure - Typographic Multi-Color Printing Press. The press shown here consists of three gravure and one typographic unit

Unit Type Combination Photogravure and Typographic Press

THE first combination gravure-typographic multi-color sheet-feed printing press ever to have been built has been announced by Harris-Seybold-Potter Company. Manufacturer states the press will produce photogravure printing at the same output as modern rotary types of typographic and offset presses used by printers and lithographers

The distinguishing feature of this press is that the excellence of photogravure as a means for reproducing pictorial subjects is utilized in combination with sharply printed type matter printed by letterpress in the same machine. The type matter is not carried on the gravure plates or cylinders but is printed from a separate curved electrotype mounted on a plate cylinder in the typographic press unit which is an integral part of the press itself.

The press, which is intended for the general printing field, prints sheets ranging in size from 17 in. by 22 in. to 30 in. by 45 in. at speeds ranging up to 6000 sheets maximum per hour, one side of the sheet.

The press consists of interchangeable photogravure and typographic printing units which can be assembled to suit requirements, in any number of units from one up and in any combination of gravure and letterpress. Each of these printing units is complete and self-contained, having its own individual plate and impression cylinders, inking devices, and impression control.

Printing unit construction is heavy and rigid. The plate and impression cylinders are machined from solid steel forgings mounted in heavy-duty precision roller bearings for supplying the heavy impression required in photogravure printing on hard stock.

Impression is automatically controlled with provision for maintaining the printing cylinders in their trip relationship, whereby a sheet may pass through a printing unit without receiving the impression.

Both the plate and impression cylinders are provided with heavy forged steel heat-treated bearers, capable of supporting the full impression between these cylinders. This construction, states manufacturer, which has been found essential for typographic presses, also is required for high grade color gravure printing, although this generally has not been appreciated. This construction, it is announced, permits the heavy gravure impression to be localized or confined to the heavily printed areas, thus relieving the pressure from the remaining portion of the sheet, whereby, to a large extent, sheet distortion is eliminated with improved register as the result.

On the gravure printing unit may be employed either a copper-coated steel cylinder or a printing cylinder arranged with plate clamps and gap cover to permit the use of etched copper plates.

The gravure ink mechanism includes an enclosed ink circulating and filtering system, automatic printing cylinder cleaning, quickly interchangeable and exchangeable doctor knife.

The typographic printing unit is similar except that in lieu of the component gravure printing parts a spirally grooved and racked typographic plate cylinder is substituted together with four form rollers, five covered distributor rollers and ductor rollers, and five distributing and vibrating drums.

A transfer mechanism for transferring sheets between the various printing units at an overhead elevation is interposed between adjacent printing units. Manufacturer states register between the various printing units is insured by the peculiar construction of the device which automatically relieves the gripper mechanism from the transferring chain while securely locking the mechanism into either of the respective transfer cylinders.

Approximately 17 ft. of sheet travel is provided between each printing, during which time the printed side of the sheet is supported on multiple air jets through which approx. 1500 cu. ft. of free air per min. is supplied. Approximately half these air jets are provided with electric heating devices by means of which heated air may be applied against the freshly printed matter to accelerate greatly the vaporization of the ink solvents. This insures complete ink setting between the gravure printing units and sufficient surface oxidation of the typographic ink so that full tinctorial printing value is obtained by superimposing the various colors over one another.

The press is equipped with the HTB Stream Feeder with provision for hand feeding during makeready operations.

Provision is made for installing a vapor duct system. Overall in-line length of press shown in the accompanying illustration is 37 ft., width is 13 ft. and the height is 9 ft.

Press Order Precedes Modernization Program

THE Pulitzer Publishing Company, publishers of the St. Louis (Mo.) *Post-Dispatch*, has ordered the equivalent of 27 high speed newspaper printing press units with five folders and 20 reels from Wood Newspaper Machinery Co., Plainfield, N. J. Announcement was made by A. G. Lincoln, Vice President and Business Manager for Joseph Pulitzer, President of The Pulitzer Publishing Co. and editor of the *Post-Dispatch*. Purchase price of the equipment was not stated and delivery is expected in about one year.

The press units will be capable of printing 150,000 forty-eight-page papers per hour including pages of four colors. R.o.p. four-color printing on various pages of the paper will be possible with the new equipment. This new press production is contrasted with the paper's present production of 96,000 papers per hour with one color.

Mr. Lincoln stated: "We've been operating the old presses for more than 20 years. Like anything else, presses wear out, and so we're going to buy new ones to modernize the plant." The decision to buy the color printing units resulted from the demand of advertisers for this type of service and from a trend in presenting editorial matter in such manner.

It is understood that the press order is part of a more than $1,000,000 modernization program for complete replacement of equipment for printing the paper and for the construction of a new annex building to house most of the mechanical departments.

The new three-story and basement *Post-Dispatch* annex building will be fabricated from reinforced concrete. The foundation and columns will be strong enough to support three additional stories. The new building, estimated to be completed in a year, will be connected by tunnel and bridged to the one now in use. Frontage of the new building will be 206 ft. by 106 ft. deep.

The Sunday comics and rotogravure section will also be published from the new annex. The mechanical work is now handled on various floors and in the basement of the present eight-story building. It is said that when the modernization program has been completed, the *Post-Dispatch* will have as modern and efficient a manufacturing plant as any in the country.

Various Mechanical Conferences Meet

New England Composing Room Executives

THE spring meeting of the New England Daily Newspaper Composing Room Executives Association will be held Sunday, May 4 in Beverly, Mass. A number of the executives attending this semi-annual meeting are expected to arrive on Saturday evening, May 3. At this time informal get-togethers and discussions will take place at Hawthorne Hotel, Salem.

The program for Sunday starts with registration of delegates at 9:30 o'clock, to be followed by an inspection of the mechanical departments of the Beverly *Evening Times*. At 11 o'clock, representatives of various equipment and supplies companies will discuss latest developments. Immediately following will be a general discussion period related to composing room problems previously submitted to the program chairman.

Following the plant inspection, conference meetings and the banquet will be held at Lodge Pole Ranch, Beverly. This is the home of Otis E. Dunham and is one of the show places of the North Shore.

Production Manager Francis Britton of the Nashua (N.H.) *Telegraph*, who is serving as chairman of the speakers' committee, has announced that a representative from Intertype Corporation will be the main speaker at the conference.

Officers of the association are: President, Francis Britton; Secretary, Joseph Mahoney of the Holyoke (Mass.) *Transcript*, and Conference Chairman Edwin A. Hutt of the Beverly (Mass.) *Times*.

Publisher Lewis R. Hovey, President and Business Manager Laurence S. Hovey, and Managing Editor Carleton B. Hovey of the Beverly *Times*, will welcome the visitors.

Southern California

THE Southern California Newspaper Mechanical Conference will be held at the Elks Temple, 607 Parkview St., Los Angeles, Calif. Secretary-Treasurer Fred J. Moyer of the Los Angeles *News*, has sent questionnaires to members asking them to submit suggested topics for discussion. It is anticipated that President Charles H. Ruhmland's committee will report on a suggested markup system for composing room use. Another feature of the meeting will be attendance of newspaper and department store advertising managers for the purpose of discussing cooperative action between the advertising executives and mechanical departments of newspapers.

(*Continued on Page 44*)

MOISTURE-SET INKS ANNOUNCED

— *Claimed To Be Odorless*

EDITOR'S NOTE:

IN March, two ink manufacturing companies announced "moisture-set" inks for certain specialty printing work, i.e., *the inks are set immediately after printing by applying water to the freshly printed sheet in the form of vapor or steam.*

The drying or setting means of inks previous to the announcement of these new moisture-set inks, fell roughly into four general classifications, those that dry by (1) Penetration, such as news inks; (2) Oxidation and/or polymerization, as in the case of letterpress and offset-lith inks; (3) Vaporization, like aniline, gravure, and the heat-set inks, and, (4) Cold-setting inks, such as the Velo process announced a year ago. The new inks just announced do not seem to fall into any of these classifications, but might be considered as being in a fifth class called Moisture-setting inks.

Hydry Inks

DEVELOPED for the purpose of preventing offset immediately after printing, the E. J. Kelly Company states Hydry inks embody a new principle in ink manufacture. They are composed of pigments and a special vehicle or varnish, this varnish being made up of a synthetic resin and an odorless organic solvent having a very low vapor pressure and an unusually high boiling point. The synthetic resin is soluble both in the solvent and in a mixture of the solvent and a limited amount of water. However, it is not soluble in a mixture of the solvent and an unlimited quantity of water. Therefore, when the varnish, formed from the resin and solvent, is subjected to an unlimited quantity of water, a thin hard film is formed providing a protective coating over the underlying portion.

Hydry inks are distributed in the press in the usual manner, but immediately after being applied, the sheet is subjected to the application of steam. This increases the water content of the surface of the ink and a thin hard film is instantly formed over the printed portion preventing the ink from offsetting on subsequent rolling or stacking.

Hydry inks are said to be odorless, due to the fact that no oxidation takes place. This, plus their no-offset qualities, makes them suitable for printing paper milk cartons, bread wrappers, and other food packages where the elimination of odor is imperative. In the case of bread wrappers, the inks can be used on standard presses equipped with rubber rollers and, according to the manufacturers, it is possible to print, wax, rewind and ship the finished product in a few hours. It is also said that in the manufacture of printed milk cartons, these inks make it possible to print, dry, die cut, strip and glue in a continuous operation at high speeds.

Two special items of equipment are necessary in order to use Hydry inks — a steam applicator and rubber press rollers. It is claimed that Hydry inks have no deleterious effects on the rubber rollers or on rubber plates.

It has been announced that Hydry inks are being manufactured and distributed by E. J. Kelly Company under license from the Michigan Research Laboratories, Inc., but that licenses for manufacture are available to others.

Vaposet Inks

NEW inks which set instantly with plain tap water are announced this month by the International Printing Ink Division of Interchemical Corporation. In this development, which the sponsor expects to have important applications, the water is applied as a vapor, either in a spray or as steam.

The inks are being sold by IPI under the name *Vaposet*. Vaposet printing has been used in experimental runs at several plants for the production of butter cartons, cement bags, breadwrappers, and other containers.

Many advantages are claimed for these water-set inks because drying is practically instantaneous and considerably faster press speeds are made possible. Because of this instant-drying, there is no offsetting and smudging. It is reported that much cleaner printing is possible with Vaposet Inks and excess penetration is reduced materially.

Vaposet inks are expected to be particularly suited for printing containers, cartons, breadwrappers, drinking cups, paper bags, and labels. In the field of food wrapper and food carton printing, it is claimed, Vaposet inks are virtually without odor.

The inks may be used on flatbed presses as well as on web fed equipment. In most cases, states the announcement, the use of ordinary spraying apparatus and water is required although rubber rollers are usually necessary. At present, it is advisable to engineer the Vaposet inks specifically for each particular job.

International Printing Ink Div. of Interchemical Corporation announces that arrangements are being worked out for licensing users of moisture-set inks, under the pertinent patents.

Gravure for Package Printing

A booklet describing gravure printing as used for printing bags, labels, cartons and wrappers, has been released by the Champlain Corporation. Photographic illustrations of presses and schematic drawings explain the straight line production of gravure — printing regular and gloss inks, metallic ink, lacquer and fabricating, as well as operation of the Champlain fully enclosed ink fountain.

Forum Type of Program

MANAGER W. E. Wines of the A.N.P.A. Mechanical Department has announced that at this year's Mechanical Conference to be held at Hotel Statler in Buffalo on June 9, 10 and 11, the Forum type of program will be followed. Parallel departmental meetings or clinics have been eliminated and no prepared speeches or topics will have been submitted in advance.

This type of program was adopted at a recent meeting of the Mechanical Committee at which Chairman F. H. Keefe of the Newburgh (N.Y.) *News* presided. There will be six sessions on the three convention days, one each morning and one for each afternoon.

Program outline is as follows:

The opening session will be devoted to a discussion of the problems of smaller newspapers (papers of 50,000 or less circulation). The program for this session will be developed by a committee consisting of Fred W. Schaub, Decatur (Ill.) *Herald & Review;* Don P. Miller, Allentown (Pa.) *Call-Chronicle;* Russell Miller, Bloomington (Ill.) *Pantagraph;* John A. Burke, Gannett Newspapers, Rochester, and Chairman of the Mechanical Committee F. H. Keefe, Newburgh (N.Y.) *News*.

There will be no simultaneous departmental sessions this year. The Composing room meeting will be held Monday afternoon; Stereotype meeting will be held Tuesday morning; Pressroom meeting will be held Tuesday afternoon; Engraving meeting will be held Wednesday morning. There will be no prepared speeches or topics submitted in advance. These four meetings will be conducted in "forum" style. At a table on the platform, there will be seated outstanding men from the department to which the session is being devoted and also technical representatives of the supply companies serving that department. The questions for discussion will be collected from the floor during the sessions. The newspaper men are asked to come prepared with questions and topics which they wish to have considered. All topics and questions discussed by the group on the platform will also be open for discussion from the floor, and discussion from the floor will be encouraged.

The Composing Room Forum will consist of six composing room foremen, representing papers of all sizes; two composing room machinists; and technical representatives from the Linotype, Intertype, Linograph, Monotype, and Ludlow companies. Leon A. Link, of the Cleveland *Plain Dealer*, will preside, and will be assisted by John A. Burke, Gannett Newspapers, Rochester, and Russell Miller, Bloomington (Ill.) *Pantagraph*.

The Stereotype Forum will be comprised of three stereotypers (from small, medium-sized, and large papers); a stereotyper from a color plant; a pressman selected by the pressroom subcom-

(*Continued on Page 44*)

PENNSYLVANIA CONFERENCE

covers much ground related to newspaper mechanical and production problems

PHOTOGRAPHY, photo-engraving, effect of the defense program on the newspaper manufacturing and supplies field, stereotyping, presswork, metal reclamation and composing room machinery, layout and lighting—these were major topics for discussion at the mechanical conference sponsored by the Pennsylvania Newspaper Publishers Association in Allentown, Pa., on Monday and Tuesday, March 31-April 1.

The mechanical executives were welcomed by P. N. P. A. President John E. Person, of the Williamsport *Sun* and *Gazette-Bulletin;* Publisher Royal W. Weiler and by David A. Miller, both of the Allentown *Call-Chronicle* newspapers.

Chairman George C. Stevens, mechanical superintendent of the Scranton *Times*, then turned the meeting over to a technical session on stereotyping. Grant F. Wilbur of Imperial Type Metal Company, discussed *Type Metals for Stereotyping*. The next speaker to be introduced was Chas. A. Babbitt of Ostrander-Seymour Co., who discussed *A New Approach To Standardization*. Mr. Babbitt made a plea that newspaper executives become "7½ pt. plate conscious" with respect to the thickness of printing plates, especially national advertising plates which supposedly are made in 0.105 in. thickness but are not furnished consistently in that thickness. He asserted that a 0.105 in thick shell cast stereotype possesses the same molding properties as an 11 pt. shell. He also stated that every week, King Features' stereotype department in New York shaves hundreds of shell stereos to 0.110 in. and hundreds of mats are molded from the plates.

Rudolph Kuhner of the Sharon *Herald* pressroom, presented a report prepared by Business Manager C. B. Lartz on one year's operation of a type metal dross renovator as used regularly in the *Herald* plant. Mr. Lartz, through Mr. Kuhner, reported that during 1940 the *Herald* produced 10,722 lbs. of dross. The quantity of dross, however, decreased each quarter partly because the mechanical force became more careful in handling the metal. While labor costs were not given for the year's operations, Mr. Lartz reported that to exchange dross for metal it costs the *Herald* 6⅓c per lb. (freight included).

According to Mr. Lartz's tabulation, the figures are as follows:

2777 lbs. dross at 6⅓c	$175.88
Flux for refining at 7c per batch	4.69
Fuel for refining at 10c per batch	6.70
Amortization of cupola	90.00
	$277.27
Prior 1940 dross exchange	$697.06
1940 cost of dross treatment	277.27
Net Savings	$419.79

Operation of the dross renovator is described as follows: The renovator is located in the *Herald's* flat-casting room. Once or twice a week the renovator burner is lighted and accumulated dross is thrown in. An hour or so later one of the boys returns and finds recovered metal in a pig mold. Upon releasing a lever, the dust-fine dross flows out and is thrown into a dross drum.

"Between 125-150 lbs. of dross are put in the renovator at one time," reported Mr. Lartz. "The recovery averaged 74%+, and tests show that the recovered metal is of the same proportions as the original metal."

Monday Evening

S. D. Evans of the Lebanon *News-Times* presided at Monday evening's meeting which was devoted mostly to pressroom problems. Questions about war priorities and their effect on the printing materials and equipment were discussed at length. James Beckett of International Printing Ink spoke on problems of ink manufacturers, and W. J. Nolan of Goss Printing Press Co. spoke on obtaining best press performance.

The *Call-Chronicle* Newspapers were hosts at a Pennsylvania-German party with a band, entertainment, sauerkraut, sausage and the trimmings.

Tuesday Morning

The Tuesday morning meeting was held in the *Call-Chronicle* conference room and was devoted to photography and photo-engraving. A cut-making demonstration was held in which photo-engraving from newspapers published in various parts of Pennsylvania were compared. Robert R. Eyerly of the Bloomsburg *Morning Press*, presided.

Upon being introduced by Chairman Eyerly, Fred J. Church of the Eastman Kodak Co. discussed *Newspaper Photography*. Maurice A. Hagan, photo-engraving superintendent of the Philadelphia *Inquirer*, talked on *Photo-engraving Methods in General Use*.

Photo Copy for Newspapers was discussed by Lamont Hartman, *Call-Chronicle* reporter and art man. Also entering the discussion were Frank B. Johnson of the Philadelphia *Inquirer*, Don Miller of the Allentown *Call-Chronicle* and J. R. Cubbison of the Sharon *Herald*.

Tuesday Luncheon

At the Americus Hotel luncheon on Tuesday noon, Douglas C. McMurtrie of Ludlow Typograph Co. spoke on *Newspaper Typography to Meet Modern Needs*. One of the important points projected by the speaker was that "This is not the time for American newspapers to make small savings at the sacrifice of readability."

Tuesday Afternoon

Composing room problems engaged the attention of the executives under the chairmanship of Joseph B. Breslin of the Bethlehem *Globe Times*.

Amos G. Hoffman of Intertype Corporation, talked in detail about the time-saving features developed recently for his company's machines. "Because labor constitutes close to 60% of the cost of publication," said Mr. Hoffman, "it is noteworthy that the improvements in line-composing machines are directed principally toward composing room economy." Among the improvements discussed in detail are: Autospacer, four-magazine mixing and non-mixing machines, six-mold disk with automatic ejector change, two-letter 18 and 24 pt. matrices, automatic magazine changes, dual alignment matrix for food store composition and the Universal Intertype.

George T. Wegemer, Mechanical Superintendent of the *St. Mary's Press*, presented a rather complete analysis related to fluorescent lighting installation in printing plants.

William K. Ulerich, of State College, *Centre Daily Times*, told the executives how an efficient composing room arrangement was finally arrived at in the *Times* plant. A rather interesting portion of Mr. Ulerich's talk was that in which he stated that after much work in making a miniature theoretical layout, he discovered he had forgotten the most important thing. He said: "We hadn't consulted the men in the shop and when we proudly took our plan to them the trouble began." Some of the remarks made by them were: "Those linotypes are too far forward," "How are you going to get a metal truck between those two type cases?" and "Somebody's going to fall over that saw if you place it there." The speaker then related how the original diagram was discarded and a new layout made. In the end, however, the equipment was placed advantageously.

Newspaper Spot Color

Under the title, *A New Concept of Color for Newspaper Advertising*, the Geo. H. Morrill Co., Div. of General Printing Ink Corporation, has published a brochure in which are exhibited tear sheet reproductions of newspaper size pages containing advertisements printed in one color and black. The color was obtained with Morill's new and improved newspaper advertising inks. There are ten colors of ink in this group, shown in block form on one page. The blocks are graduated from solid to halftone highlight area.

The examples of black and one-color advertisements show advertisements suitable for reproduction either with or without the color. Only one matrix or one electrotype need be furnished. If the advertisement is to appear entirely in black, the color portions can be routed from the stereotype plate. The spot-color advertisements are designed so as to print without close color registration.

The ten colors are those most widely used in newspaper advertisements in which only one color with black is used.

Some Personages Attending Pennsylvania Mechanical Conference

1—Howard Lamade, Williamsport *Grit;* William Schnell, R. Hoe & Co.; P. N. P. A. Mechanical Committee Chairman George Stevens of the Scranton *Times*. 2—Mechanical Superintendent Harry Sherman, Allentown *Call-Chronicle;* Charles Rahme, Mergenthaler Linotype Co.; President Royal W. Weiler of Allentown Call-Chronicle Newspapers. 3—T. A. Ryan, International Printing Ink, and Wm. F. Grenier, New England Newspaper Supply Co. 4—I. Z. Buckwalter, Lancaster Newspapers; Joseph B. Breslin, Bethlehem *Globe-Times;* George T. Wegemer, St. Mary's *Press;* M. L. Detwiler of Lancaster Newspapers.

CHANGING OVER *to new type dress handled expeditiously by Composing Room Superintendent Al Oberg and assistants at Flint (Mich.)* Journal — *New makeup features adopted for easy reading*

By H. GEORGE GILBERTSON*

*Chief Composing Room Machinist, Flint (Mich.) *Journal*

WITH its issue of Monday, March 3, the Flint (Mich.) *Journal* appeared in a new news dress, 12 pica column with 1 pt. indention on all news and classified slugs so that while still using 4 pt. column rule, the added white space at either end of the slugs gives the impression of 6 pt. column rule. This story is written more from the standpoint of how the changeover from the old to the new dress was made in the composing room rather than primarily from the reader point of view. The reader point of view, of course, is the important thing but we will tell here what was done to help *Journal* executives provide an easier-to-read newspaper.

From time to time, Manager E. R. Chapman and Editor M. A. Gorman have adopted new makeup, news dresses and other means to improve the physical appearance of the *Journal*.

After Composing Room Superintendent Oberg had supplied pages set up in several different styles, the forms were stereotyped and printed on the press to enable Messrs. Chapman and Gorman to make accurate comparisons with pages from regular daily editions. Eight point Intertype Regal No. 2 with Bold Face No. 1718 to be cast on a 9 pt. slug was chosen.

One font of 8 pt. Regal with Cairo Bold is used for descriptions under news cuts, replacing the light face type formerly used and which was too light to match the general tone of the illustrations. These cut lines are set on a machine equipped with Mohr Lino-Saw with the jaw changing levers and stop studs to be described below. All cut lines are set with a half-em indention both sides. Most cuts in our paper do not measure full column width and this indention makes the type lines more nearly the width of the cut.

The leads for front page stories and for editorials are now set in 10-point Regal on 11-point body. These fonts replace the 9-point on 10-point body formerly used.

Another innovation introduced in the pages of the *Journal* is the elimination of sub-heads in long stories. The monotony of the page is relieved by setting the first two or three words of occasional paragraphs in bold face. Leaving out the sub-heads gives that many more lines of space for news matter.

To allow more white space for easier reading, all 5½ pt. (classified matter) is set on 5¾ pt. body (0.0805 in.). Standard 5½ pt. liners permit setting knives at 0.080 in. or larger and still permit slugs to be trimmed "square."

Cut-off rules between classified ads formerly were Monotype hair line on 2-point body. A change was made to Monotype ½ pt. face on 3 pt. body. This additional thickness of rule body and the increased space between each ad improves the appearance of the classified pages with a negligible loss of lines per page.

On Sunday, March 2, after the Sunday edition was out of the way, the complete change-over was made.

Before making the change of news type dress, it was noted that the 4 pt. column rule caused a too crowded appearance, especially with the larger type sizes. After further experiments, it was decided to indent all news type including the slugs for classified pages, 1 pt. on each end of the 12 pica slug. This indentation, in connection with the use of 4 pt. column rule, gives the same white space as 6 pt. column rule made up with type flush on both ends of the slug. In

(*Continued on Page 48*)

Fig. 1. — In the Flint (Mich.) Journal *composing room, Superintendent Al Oberg uses some of the ad alley line-composing machines at certain times for straight-matter composition. In the* Journal, *all news and classified slugs are indented 1 pt. at each end of the slug. To facilitate adjusting the vise jaws for the 1 pt. indention, Machinist Gilbertson devised the means which enable the operator to adjust the jaws for indention and back again to flush.*

This is view of left end of Linotype vise equipped with Mohr Lino-Saw. Means for securing flush setting to 1 pt. indention on Linotype left-hand vise jaw may be secured by rotating the upright lever through a small sector of a circle by banking the lever against one of the two horizontal stop pins. The adjusting lever is screwed into the wedge adjusting bushing (E-582). In this picture the lever is set halfway between the studs to better display the stop studs. With the type flush on slug, the lever rests against the left-hand or back stop stud, and against the right-hand or front stop stud for indention. Of course, the set screw which normally holds the bushing in fixed adjustment must be loosened and reset with each change. To determine the position of the lever in the bushing, the left-hand rear stud (8-32 screw) was set into the wedge bracket as shown. A hole was then drilled into the bushing to position the lever against the stop stud. After loosening the set screw, move the bushing with lever until the first letter character is indented 1 pt. on the left-hand end of the slug. When correct position has been determined, put in another 8-32 screw for the right-hand stop stud. On the wedge bracket near the left-hand stud, paint with white paint the letters "FL" for word "flush"; opposite the front stud, paint the letters "IND" for "indent." To secure the adjustment, the operator merely loosens the set screw, moves the lever to position desired, and tightens the set screw.

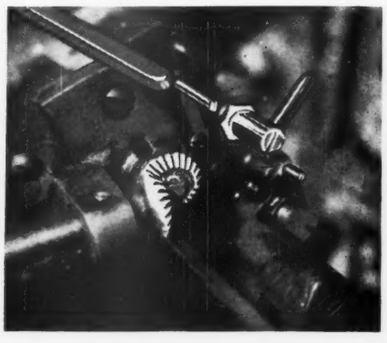


Fig. 2. — View of right-hand side of Linotype vise; machine is equipped with Mohr Lino-Saw. The regular right-hand jaw adjusting screw is not made with a head; in order to provide a head for attaching an adjusting lever, a l.h. knife adjusting screw (E-952) is used. In this illustration the lever is set center to better display the stop studs. Grind off about ½ in. of the unthreaded end which will allow enough threads to hold the screw and let the head extend out far enough to permit attaching a bar through the slot for a lever. Temper is taken out of the head so that the lever can be set in with two No. 52 pins. This lever can be ¾ in. long, which will permit it to clear the Mohr saw pinions when turning the screw in or out. With jaw set so the type is flush at right-hand end of slug, the lever rests against the upper or left-hand stop stud (8-32 screw). (Grind off a trifle at a time from the unthreaded end of the screw shank until the lever rests against the left-hand stop stud when type is flush with the end of slug.) Then turn the adjusting screw with lever clockwise until the first letter character shows 1 pt. indention on right-hand end of the slug. When correct indented position of the right-hand vise jaw has been determined, set in an 8-32 screw for a stop stud. Leave a small ½ in. flat wrench at the machine so the operator may loosen and reset the lock nut when making changes. At right-hand stud paint with white paint the letters "IND" for "indent" and at the left-hand stud paint the letters "FL" for "flush" adjustment of the right-hand vise jaw.

EQUIPMENT *and Supplies*

Vented-Tube Nozzle

After having undergone a lengthy testing period under actual production conditions in printing plants, Lanston Monotype Machine Company now announces its Vented-Tube Nozzle is successful. The nozzle is for use on the composition typecaster in sizes up to and including 12 pt. and on the material maker. Among the results announced are (1) Average increase of 15% in weight of materials made, indicating more solid casting, better printing faces and elimination of air holes; (2) An average increase of 10% in casting speed; (3) Casting temperatures lowered 25 deg. to 50 deg.; (4) "Spitting" at the nozzle is eliminated so that a nozzle shield is not required, the pot is kept cleaner and metal drossing is reduced.

The vented tube attached to the nozzle as shown in the illustration makes it possible for air to escape more readily from the mold at the casting moment and permits excess metal to flow back into the pot crucible. When the type metal is forced upwardly through the nozzle and fills the mold cavity, the air in the mold is forced out of the mold and escapes through the vented tube and out of the vent holes. Excess metal following down the tube is discharged below the metal surface in the crucible. This lack of surface agitation and non-exposure of the discharged metal to the air reduces drossing of the metal.

For the composition typecaster, the vented-tube nozzle is made in one model. According to the size of material being cast and the kind of metal used on the material maker, several models of nozzles are provided.

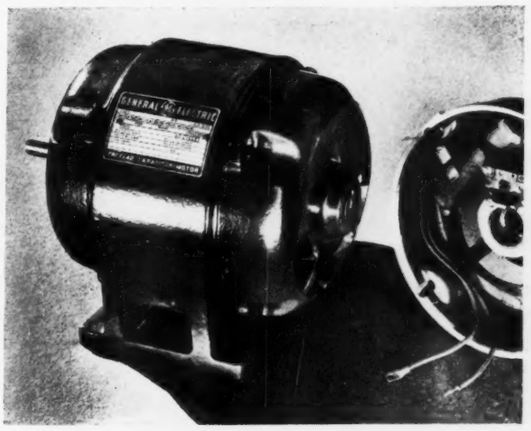
View of Vented - Tube Nozzle for use on Monotype Composition Typecaster in sizes up to and including 12 pt., and for Monotype Material Maker. Vented tube attached to nozzle permits air to escape more readily from mold chamber resulting in more solid casting. Average 10% increase in casting speed is reported.

Tri-Clad Capacitor Motor

As an extension of its line of new polyphase induction motors, General Electric now offers a new Tri-Clad capacitor motor designed to meet a large number of varied industrial applications. The capacitor motor may be obtained with either ball-bearing or sleeve-bearing construction, and is available in two types, Type KC and Type KCJ. The Type KC is designed particularly for applications requiring moderate starting torques such as fans, blowers, and centrifugal pumps. The Type KCJ is designed for compressors, loaded conveyors, reciprocating pumps, and any other applications requiring high starting torque. The capacitors are mounted inside the end shield on the normal-torque motor, while on the high-starting torque motor, 1½ h.p. and larger, the capacitors are mounted in a compact case on top of the motor frame.

In both of its forms, the capacitor motor incorporates all of the protective features of the Tri-Clad line: 1) complete mechanical protection through the use of a cast iron frame, 2) electric protection made possible by the use of Formex wire in the magnet coils, and 3) improved bearing design and lubricating arrangements. It also utilizes the cast-aluminum rotor and double-end ventilation.

The transfer switch is a simple, sturdy device which transfers the motor from the starting to running connection. It consists of a centrifugal mechanism mounted on the rotor shaft, and a stationary switch located in the end shield. As the motor approaches full speed, centrifugal force moves the collar of the rotating mechanism away from the switch by snap action, thus causing the switch to open.



View of General Electric's new Tri-Clad capacitor motor. The end shield to the right of the motor shows the location of the capacitors and transfer switch.

A new pressed-steel conduit box provides unusually large working space and simplifies installation in close quarters. The box may be mounted in any one of four positions. Clearly marked terminals permanently identify the leads. A graphic, easy-to-read connection plate of stainless steel shows external connections.

Improved Steel Shoes for Type Cases

Another important improvement in type case construction has just been announced by the Hamilton Manufacturing Co. All type cases made for use in either wood or steel type cabinets are now being equipped with steel shoes on the end rails of the cases. These steel shoes, shown in illustration, make the operation of type cases much easier. This will be greatly appreciated, states the manufacturer, by all printers having large fonts of type in their cases as only about one-third the effort is required to move the cases back and forth. The steel shoes also reduce wear on type cases.

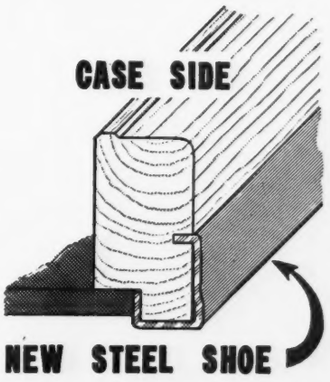


Diagram shows newly designed steel shoe for Hamilton Mfg. Co.'s type cases. Manufacturer states the new shoe permits moving cases containing large fonts back and forth with one-third the effort.

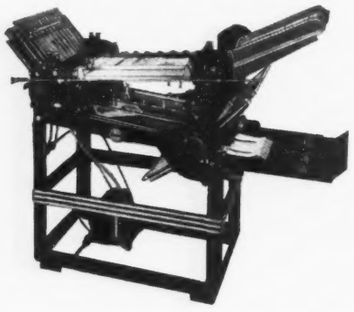
For several years it has been possible to get type cases equipped this way at extra cost but a new and improved design has now been developed. The improved shoes can be produced at a cost that allows use as standard equipment.

Permacel Splicing Tape—*By means of a processed, paper-backed adhesive tape known as Permacel, a simple method of splicing has been announced. The splicing operation simply involves the placing of a strip of tape at the point where the paper is to be joined. Flexible and strong, states Industrial Tape Corporation, the tape splice runs through the rollers and presses without jamming or coming apart.*

Davidson Folding Machines

The Davidson Manufacturing Corporation announces a new line of folding machines.

Manufacturer states design is such that instead of changing the direction of travel when making a right angle fold, the Davidson Folder causes the paper to turn through a 90 deg. angle. Traveling on web tapes, the sheet receives its first fold, then strikes an adjustable stop which causes the sheet to turn as it travels. It is then squared automatically by a micrometer adjusted guide, putting it in position for the right angle fold.



View of Davidson 14 in. by 20 in. 4-Way Folder. If a simple fold is to be made, the sheet goes directly into stacker from last folding unit used.

All of the folding units are parallel to each other and are used for both parallel and right angle folding.

Manufacturer explains that the sheet does not stop and change its direction of travel in making a right angle fold, but moves continuously at maximum speed, thus producing right angle folding at high speeds.

The Model 121 Parallel Folder will handle sheets from 3 in. x 3 in. up to 14 in. x 20 in. It is equipped with 1/6 h.p. motor and is mounted on a sturdy metal stand with shelves for storage. Overall size, 25 in. by 38 in.

The Model 133 4-Way Folder is designed for general use and is said to produce a multitude of different folds, both parallel and right angle. Equipped with ½ h.p. motor. Will handle sheets from 3 in. by 3 in. up to 14 in. by 20 in. Occupies 25 in. by 63 in. floorspace.

This 4-way folder can also be furnished as a 2-Way or a 3-Way Folder, the 2-Way being made so that, by the addition of the necessary units, it can be converted into either a 3-Way or a 4-Way machine.

On both the 3-Way and the 4-Way models the stacker on which the folded sheets are delivered may be moved from one folding position to another. If a simple fold is to be made, the sheet does not travel through all of the folding units before reaching the stacker, but goes directly into the stacker from the last folding unit used.

Safety Filling Cans

Justrite Mfg. Co. has provided a Special Safety Filling Can for handling gasoline and other flammable liquids that must be poured into fuel and other tanks and for filling smaller containers with minimum fire risk. The Special Filling Can is made in sizes ranging from 5 to 20 qts. A flexible spout makes it easy to pour without spilling. The metal spout hose can be turned in any direction. Three interchangeable hose sizes are available — ½ in., ¾ in. and 1 in. outside diam.

Easy and rapid pouring without back pressure is assured, states manufacturer, by an air vent built into the pouring spout valve. The separate filler opening makes easy the filling of the can from hose or gasoline pump. The filler opening cover acts as vapor escape valve to relieve excess inside pressures.

Safety non-flash-back screens, consisting of two layers of wire mesh, are available. These may be inserted or removed for cleaning without special tools.

View of Justrite Special Safety Filling Can, with flexible spout which can be turned in any direction makes easy the task of pouring without spilling.

No. 0 Vandercook Proof Press

Vandercook & Sons announce the addition of the No. 0 Vandercook Proof Press to its line of proof presses. It is streamlined for modern appearance, and is designed for easy and fast operation.

This Vandercook No. 0 hand-inked proof press will take a form 12½ in. by 21 in.

It has a bed 13 in. by 28 in. and will take a form 12½ in. by 21 in.

The No. 0 Vandercook can be used in smaller plants. In larger plants it can be used for proving type in galleys at the casting bank. For advertising departments and in advertising agencies it will meet most requirements for record proofs or proofs for layout paste-ups. It can be used in schools for printing type, linoleum blocks, or for other classroom projects. Register devices are available with and without grippers for proving work in color.

Manufacturer states the No. 0 Proof Press will prove fine screen halftones and type. The press is hand inked.

Complete information can be obtained by addressing the manufacturer.

New Stymie Sizes

Lanston Monotype Machine Company has cut two new sizes of Stymie Bold No. 790. These are 16 and 21 pt. It is stated that the company feels the jump between 18 pt. and 24 pt. in heavy display faces is too great and that an in-

The new 21 pt. Stymie Bold

between size would be useful occasionally. The new 21 pt. size of Stymie is an expression of this opinion. Both of the new sizes may be had in standard display matrices and may be used on the Monotype Type-&-Rule Caster, the Monotype-Thompson Typecaster and the Monotype Giant Caster.

5000 sheets in two colors . . . per hour

A running speed of 5000 two-color sheets per hour means real production. In fact, according to users of Cottrell Claybourn Two-Color Presses, these machines average up to 4000 sheets (two colors) NET per hour . . . and sometimes even more.

For printing direct-by-mail pieces, booklets, broadsides, folders, and labels, and for two- and four-color publication printing, the earning capacity of the Cottrell Claybourn Rotary is remarkable. Write for more particulars about it.

PROFIT-EARNING FEATURES

HIGH-SPEED OPERATION. A speed recording tachometer is included with the press. Geared speed is normally 5200 sheets per hour.

DEPENDABLE FEED AND DELIVERY. Continuous or pile suction stream feeder. Pile delivery with vacuum sheet slow-down. Automatic pile lowering mechanism for both feeder and delivery. Joggers are provided with graduated scales to reduce down time when changing sheet sizes.

QUICK STARTS. Claybourn spirally grooved plate cylinders and rapid register hook system. Minimum make-ready.

ACCESSIBILITY. Convenient ink with roll-back. Impression cylinder readily accessible, with ample space for pressman. Easy access to plate cylinders for plating up and registering.

SUPERIOR DISTRIBUTION. Four form rollers for each color, interchangeable with distributor rollers. All rollers are in direct contact with oscillating drums, which are adjustable to various degrees of oscillation. Ink supply is adjusted by means of sensitive keys, spaced 1½" on centers, for quick and easy setting of colors.

ECONOMY OF INK. One color reports a 15% saving of ink, as compared with flat-bed presses another, 20%.

VERSATILITY. Printing two colors in one operation, including four-color process work twice through, the Cottrell Claybourn Rotary is suitable for any job that requires plating, regardless of length. Curved plates are readily obtainable from any electrotyper.

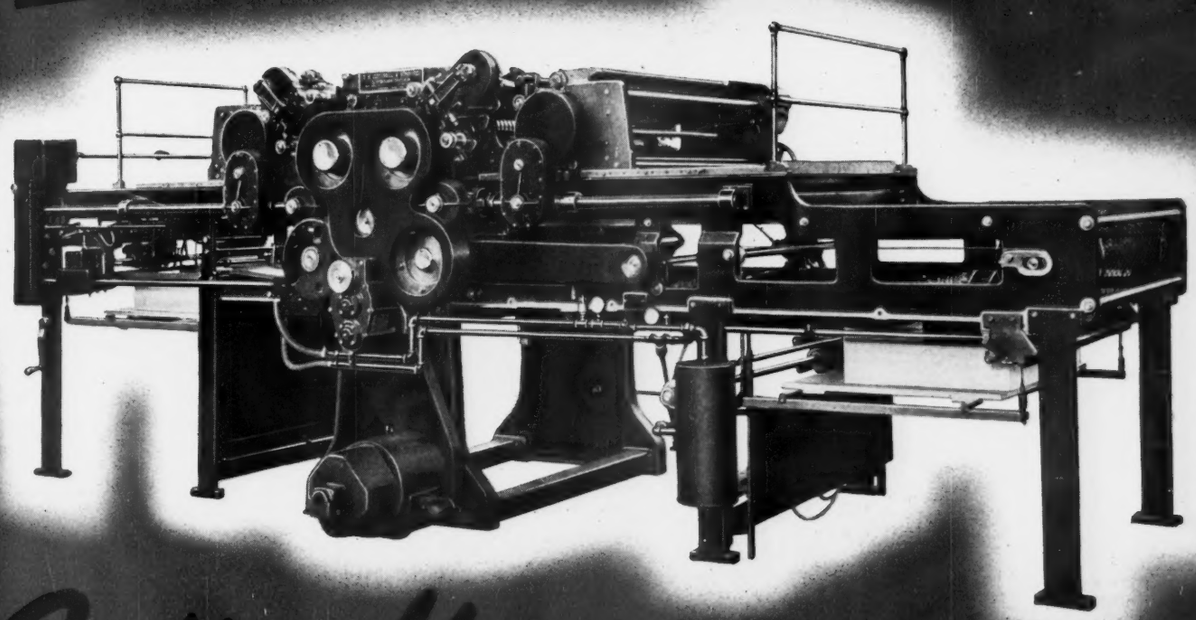
EASY TO OPERATE. This press is being run successfully by pressmen who had never before seen a rotary press. Your present staff can operate the Cottrell Claybourn Rotary.

WIDE RANGE OF SIZES. . . . Designed to fill the needs of any commercial plant, large or small. Standard press specifications are as follows:

Press Size	Maximum Sheet	Minimum Sheet	Maximum Form
CC-42	29¼ x 45	17 x 22	28⅝ x 44½
CC-47	36 x 49	18 x 26	35½ x 47½
CC-54	40 x 99	30 x 30	39½ x 58½

C. B. Cottrell & Sons Co., Westerly, R. I.

NEW YORK: 25 East 26th Street • CHICAGO: Daily News Building
CLAYBOURN DIVISION: 3713 N. Humboldt Avenue, MILWAUKEE, WIS.
SMYTH-HORNE, Ltd., 1-3 Baldwins Place, Grey's Inn Road, LONDON, E. C. 1



Cottrell Claybourn Division • Two-Color Rotary Press

Outstanding Color Page . . .

ONE of the recent outstanding examples of newspaper advertising color printing is that of an all-over bleed page in the Tuesday, March 11 issue of the Youngstown (O.) *Vindicator*. This issue contained a 10-page section, the front page of which was printed with a yellow all-over bleed background. Three colors of ink in addition to black were used. The effect is harmonious, the colors are bright and the craftsmanship is excellent.

Magenta ink was used for the large upper display lines and the darker florets shown in the accompanying miniature black and white reproduction. Pastel blue ink was used for the area immediately surrounding the lamb, the word "Abounding," and the signature background. The trellis work and foliage were overprinted in blue on the yellow background to produce the green color. The lamb, a floating cloud or two, and some of the florets appear in white (natural newsprint).

To obtain the all-over yellow bleed plate, it was necessary of course, to provide two original zinc plates from which the stereotype plates were molded. The size of the *Vindicator* page is approx. 17 in. wide by 23⅝ in. deep. The all-over yellow plate original measured 17⅛ in. wide by 24 in. deep to compensate for dry mat shrinkage.

After completion, the zinc plate was sectioned cross-wise of the page so as to provide patterns for two stereotype plates. The zinc original for the upper part of the page was 15⅜ in. deep. The zinc plate for the lower part of the page was 8⅝ in. deep. These were molded separately and stereotype plates cast with the upper and lower yellow printing sections in position on each full size stereo plate, so that when placed on two press units, the positions of the yellow printing parts of the plates were such that the all-over printing effect was secured after staggering the plate cylinders in two press units used for printing the yellow. Staggering the press cylinder brought the two plates in position to cover the top and bottom page margins.

Editor's Note — See Newspaper "Bleed" Pages, August 1934 issue of *Printing Equipment Engineer* for George Fuller-Walter Ogden means for obtaining bleed pages, and the experiences of K. L. Gregg, Orel M. Harper and Frederick Forstall. See also December 1934 issue for printing double-truck bleed pages in color.

Miniature reproduction of outstanding color page appearing in a recent issue of the Youngstown (O.) Vindicator.

66 ANNIVERSARY SALE
Starts Wednesday
Again Youngstown's oldest department store will celebrate its birthday in traditional and fitting fashion. It will be the gala special-value occasion which the entire OH-PENN Territory always so vigorously enjoys. Friends and patrons from miles around will flock to participate in its many offerings — all new — all Spring-fresh in Fashion — all dependable Strouss-Hirshberg quality—and all at the most important of Anniversary Savings!
Celebrating Sixty-Six Years of Dependability
BOUND INTO SPRING with ITS Abounding VALUES
On Sale in Our Youngstown Store Only
Extraordinary!
Fur Coats and Jackets
Usual $139 to $169
Garments Sale-Priced
$100
$1 Stamped Cases—Pair 66¢
$9.95 "Pop-Up" Toasters $7.96
$1.98 "Numdah" Rugs at $1.59
90-Coil Bed Springs at $6.66
89c Ironing Pad, Cover 66¢
$4.45 Dinnerware Sets $2.76
Big Ivory Soap Feature 20 for $1
Gilt-Edge Playing Cards 3 Decks 66¢
"Eleanet" Hairnets, now ½ Price
10c O. N. T. Spool Cotton 8 for 66¢
Women's $1.19 Shirts at 78¢
59c Spring Neckwear 46¢
Women's New Handbags 88¢
59c Costume Jewelry at 3 for $1
$1 Rayon Fabric Gloves 68¢
$2 "Bill Sims" Dresses $1.69
Women's Rayon Panties 3 for $1
$2 "Bali" Brassieres at $1.49
Children's 59c-69c Toys 2 for $1
Men's $1.95 Robes—now $1.00
25c "Hershey" Kisses at 19¢
29c Linen Toweling at 12½¢
50c Plaid Blankets, each 29¢
Women's Silk Hosiery 29¢
Women's $1 Gowns at 66¢
Women's Spring Hats 86¢
Usual $2-$2.59 Dresses $1.00
No Phone, Mail or C. O. D. Orders
One Convenient Lay Away Plan
STROUSS-HIRSHBERG'S

Fifth District Conference

The Detroit Club of Printing House Craftsmen will be host to the Fifth District Craftsmen's Conference on June 13, 14 and 15. The fifth district is composed of the states of Michigan, Ohio, Indiana, Kentucky and Western Pennsylvania. It is planned to hold the conference on board the steamer Georgian which will sail from Detroit to Georgian Bay in Canada. Tobermory, destination of the Conference, is in the eastern end of Georgian Bay, near Flower Pot island, a new national park. Reports indicate that this unique conference plan will be supported enthusiastically by Fifth District Craftsmen and their ladies.

BOOKS
RECEIVED

How To Adjust Work-Ups

THIS is a booklet prepared collaboratively by William H. Lichter and George F. Smalley for letterpress printers. In the booklet are contained suggestions for proper procedure in locking up forms for the elimination of work-ups. Also given are the means for eliminating work-ups on the press.

Some of the titles discussed are How to Prevent Work-ups, Wood Furniture, Work-Ups in Mortised Plates, Proper Justification, Use of the Square, Quoins Falling Out of Form, One-piece Quoins, Rules Punching Through Sheet, Faulty Linotype Slugs, Page Line-up, Hints on Cylinder Imposition (Cross Bars), Slugs Working Up, Cuts and Plates Over Type-high, etc.

The authors state: "Work-ups cannot be eliminated in their entirety as long as we continue with the indispensable use of wood furniture, quads, slugs, wood mounted plates. . . . However, the competent stoneman can reduce and rectify work-ups expediently only by whatever past experience and experimenting he has had with them."

How To Adjust Work-Ups, by Wm. H. Lichter and George F. Smalley. Size, 5¼ in. by 7¼ in., 24 pages and cover. Price $1 per copy. May be ordered through *Printing Equipment Engineer*. Handling margin on books is such that cash must accompany all orders for books.

NEW . . . ECONOMY ROUSE BAND SAW PRICED HUNDREDS OF DOLLARS LOWER

For years H. B. Rouse & Company engineers have been working on a ROUSE BAND SAW that EVERY PRINTER with one or more casting machines could profitably use.

And here it is AT LAST --- not a few dollars lower in price---but actually **HUNDREDS OF DOLLARS LESS** than the original model. Yet the ECONOMY ROUSE BAND SAW has the same automatic SLUG LENGTH SELECTION features, and cuts with equal accuracy.

The MASTER ROUSE BAND SAW cuts a FULL galley of slugs to measure in 35 seconds. They may be all one length, or as many different measures as the slug will take. They may be cut to one pica or any fraction of the slug lengths WITHOUT SETTING GAUGES, CHANGING CLAMPS, or picking measures.

The ECONOMY ROUSE BAND SAW does the same work as the Master Model, quickly and economically. At the astonishingly LOW PRICE of the NEW ECONOMY ROUSE BAND SAW, it should be in every newspaper or commercial printing plant where ads, catalog pages, or jobs are set on Linotypes, Intertypes, or Ludlows.

The NEW ECONOMY ROUSE BAND SAW in no way slows down line casting machine operations---yet it will take the output of several machines---and saw as accurately as the slugs can be cast. The NEW ECONOMY ROUSE BAND SAW costs LESS than most standard circular saws.

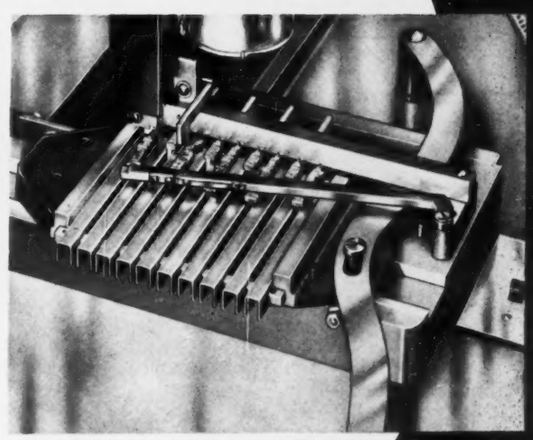
If you have wanted LOWER sawing cost, but felt the ROUSE BAND SAW investment too much, delay no longer. Here is your opportunity---subject to delivery as production permits. Write on your letterhead or mail the coupon below for complete information.

Priced for Small Plants

The NEW ECONOMY ROUSE BAND SAW has many of the time saving features of the larger model, yet it costs hundreds of dollars less.

Automatically Selects Lengths

An entirely NEW feature on the ECONOMY ROUSE BAND SAW makes it possible, for the first time, to get automatic slug length selection on Ludlow slugs. Ludlow equipped plants will find this feature saves time and eliminates waste of underpinning materials.



Now Cuts Ludlow Slugs

The Ludlow Slug Holder permits the sawing of Ludlow slugs to different measures before underpinning. The Ludlow mats shown cast the projections which determine position of cut. No extra operation is necessary. The separate galley permits proving of slugs after they are cut.

H. B. ROUSE & COMPAN

3216 NORTH WAYNE AVENUE, CHICAGO, ILLIN

Please send complete information on the NEW ECONOMY ROUSE BAND SAW.

Name_____

Address_____

City_____

EXECUTIVE ¶s

The General Printing Ink Corporation announces the appointment of William Recht as assistant secretary and assistant treasurer. He continues to maintain his position as General Manager of the Rutherford Machinery Company Division and General Manager of the Export Division of the Corporation.

Just recently, Alexander Clark, who has been composing room foreman of the Elgin (Ill.) *Courier-News*, has been promoted to the mechanical superintendency of that paper. He succeeds his father, the late Herbert Clark. Ralph L. Peterson has succeeded to the position of composing room foreman.

Alexander Clark *Ralph L. Peterson*

Edw. G. Ahearn assumed his duties the first of April as Mechanical Superintendent of the Philadelphia *Public Ledger*. Formerly, Mr. Ahearn was general mechanical superintendent of Hearst Newspapers with offices in New York, and for a time was a member of the A.N.P.A. Mechanical Committee. He is well known among newspaper executives throughout the country.

Edw. G. Ahearn

John P. Minard, western division representative for the Ideal Roller & Manufacturing Company, died on March 7 as the result of a heart attack, while on a sales trip to Muncie, Ind. Mr. Minard was 39 years old. He was well known in graphic arts circles having belonged to a number of the clubs connected with the industry. He is survived by his wife, Ruth, and their two daughters.

Huber Appointments

President Walter Huber announced recently the appointment of John M Masterson as sales manager of J. M. Huber, Inc. Mr. Masterson will supervise domestic and foreign ink sales, including the Velo Cold-Set process. Before assuming charge of Huber's Velo Division in June 1940, Mr. Masterson was associated as vice president with R. Hoe & Co. and more recently with Geo. H. Morrill Div. of General Printing Ink Corporation.

John M. Masterson

Mr. Huber also announced the association of Robt. J. Cashion as comptroller of the company. Mr. Cashion is a C.P.A. and is a member of the American Institute of Accountants.

Marsh Moves Offices

William B. Marsh, well-known in the graphic arts both as public relations counsel for American Type Founders and as a writer and speaker, moved his office on April 1 to 225 Varick Street, New York. The change was made to facilitate the work of the Graphic Arts Sales Research Associates, of which Mr. Marsh is secretary, and in which he will cooperate actively with William E. Rudge's Sons, Inc., one of the original underwriters of the group.

Dively Elected

At a director's meeting, the Harris-Seybold-Potter Company elected George S. Dively, formerly assistant treasurer, as Secretary-Treasurer.

Dively has been associated with Harris since 1937 and was placed in charge of the company's financial department in 1940.

George S. Dively, new Secretary-Treasurer of Harris-Seybold-Potter Company

A graduate of the University of Pittsburgh and of the Harvard Business School, Mr. Dively has spent the last ten years in engineering, production and financial work.

Intertype's 25th Report

In President Neal Dow Becker's 25th Annual Report to Stockholders of Intertype Corporation, it is stated that operations of the Corporation, its domestic subsidiaries and Intertype Ltd. of England, for the year ended December 31, 1940 (after reserves for taxes and depreciation) resulted in a net profit of $286,560.28. This is equivalent to $1.29 a share on the 221,740 shares of common capital stock outstanding, and compares with a net profit of $122,632.75, or 55c a share for 1939.

President Becker states: "In addition to its normal activities the Corporation has undertaken work . . . in the armament field. The results of this are not reflected to any appreciable extent in the 1940 operations, and in any event the profits are not expected to be large; but we should feel recreant to our duty if a generous portion of the time of our engineering staff, workmen and machine equipment were not devoted to public service."

Splendid Conference Report

A complete report of the second annual meeting of the New England Newspaper Mechanical Conference held at Hotel Statler, Boston last October, has been published. The report has been set in 8 pt. type and printed in bulletin form, 5⅞ in. by 9 in. and consists of 80 pages and cover. Executives of the New England Conference are to be congratulated upon providing a permanent record of the proceedings. Other mechanical conferences might do well to provide executives attending their conferences with similar reports.

When you set out to install a

TYPESETTING MACHINE

CONSIDER YOUR FULL REQUIREMENTS

The First Thing to Remember is that it is not likely your flow of work will enable you to keep a typesetting machine busy *all the time*—which means idle hours for both the operator and the machine unless you have other work for them to do.

The Second Thing to Remember is that the Monotype Typesetting Machine will efficiently produce any kind of composition which can be done on other machines and, in addition, will do some kinds of composition that other machines cannot do at all.

The Third Thing to Remember is that the Monotype is the only typesetting machine that can be profitably employed in making type, rules, leads and slugs for use in hand composition when it is not busy setting type. *The Monotype sets type in sizes from 4 to 18 point; casts type in all sizes up to 36 point; makes rules, leads and slugs from 1½ to 12 point.*

The Most Important Thing to Remember is that the ability of the Monotype to produce both machine composition and type and materials of high quality for hand work makes it the most profitable typesetting machine for you to buy—not only from the standpoint of operation, but also because it helps to build business through better service to buyers of printing.

IF YOU ARE REALLY INTERESTED IN LEARNING HOW A MONOTYPE CAN SERVE YOU AND YOUR CLIENTS, WRITE TO US. WE'LL BE GLAD TO TELL YOU. SEND FOR THE "3-WAY SYSTEM" BOOKLET.

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA, PENNA.

SET IN MONOTYPE BASKERVILLE WITH STYLESCRIPT AND THE 20TH CENTURY FAMILY

STRIPING DEVICE *for marking special editions is operated through frictional contact of synthetic rubber disk with paper — Bookbinders' ruling ink used*

A FRONT page striping device which "prints" a continuous colored stripe along the right-hand margin of the Peoria (Ill.) *Journal-Transcript's* Blue Streak Edition has been designed by Pressroom Superintendent Charles Mallm. Considerable production savings have resulted because of the use of the device.

Perhaps these savings could best be explained by stating that the eighth edition which comes off the press every afternoon during the week (except Sundays) at 4:15 o'clock, formerly was known as the Peach Sports edition because it was printed on peach-colored stock. Some time ago, use of the peach-colored paper was discontinued and the Blue Streak edition was substituted. This edition is printed entirely on white paper and is characterized by a blue streak running vertically the entire length of the right-hand side of page 1.

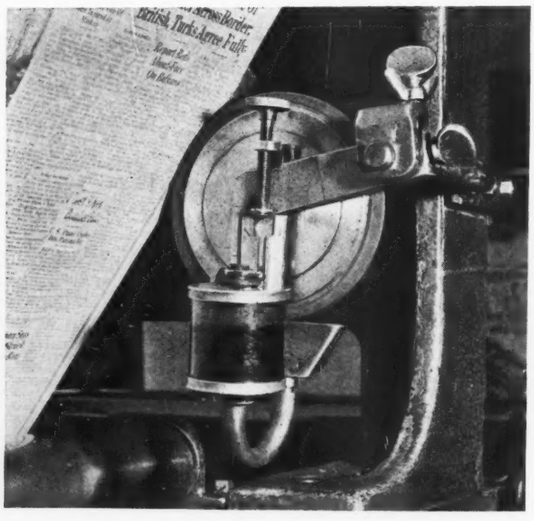
Some of the savings resulting from the elimination of the colored stock and the use of the striper are as follows: (1) The office saves the expense of the waste paper caused by changing from white to colored roll stock to make the run, and again on the following day the waste caused by changing back to white rolls; (2) Time is saved in changing from white to colored rolls because the edition follows immediately after the City run. Another advantage is that the paper is easier to read and halftones reproduce much better on the white stock. Another problem has been eliminated by changing from peach paper edition to the Blue Streak edition. Some of the newsboys had a habit of hawking regular editions as extras. Despite every precautionary measure taken by the circulation department to curtail this type of hi-jacking, it was not completely solved until Mr. Mallm's striper was put into use. Now, when a real extra appears upon the streets, a red streak on the right-hand margin of the front page marks it as a true extra.

A detailed description of the Mallm striping device really is not necessary, since the reader can form an idea of its construction by referring to the accompanying illustration. The striping wheel is made of synthetic rubber, $\frac{1}{8}$ in. face and $5\frac{3}{4}$ in. diam. A $\frac{1}{16}$ in. circular plate at either side of the synthetic rubber striping disk reinforces the disk which together with the side plates is mounted on a ball bearing. Supporting the striping disk on its ball bearing is an adjustable forked lever extending from a fixture on the former frame. It will be seen that operation of the striping disk is entirely through friction supplied by the moving paper on the former, since location of the striping device is opposite the former. When not in use, the device may be turned out of the way against the former frame.

Ink is supplied to the striping disk by a reservoir constructed from a sight-feed oiling cup mounted on an adjustable sliding bracket, which in turn is positioned between two rails attached to the vertical well supporting bracket. The ink flows from the cup through a curved section of rubber hose to a well $\frac{3}{8}$ in. wide by 3 in. long by $1\frac{1}{4}$ in. high. The interior of the well or fountain is filled with natural sponge cut to size with a razor blade. This well is adjustable up or down by means of the knurled head screw shown in the illustration to cause the saturated sponge to contact the rim of the synthetic rubber disk. As the wheel is revolved by frictional contact with the paper, it is supplied ink from the sponge, which in turn gets its ink from the reservoir through the rubber tube. The reservoir or ink cup, also is adjustable vertically (screw not visible) to prevent the level of the ink getting below the top surface of the sponge. Mr. Mallm states he has not had to change this latter adjustment because the Blue Streak edition consists of only a 2500 run. Another way to explain this adjustment would be to state that the level of the ink in the reservoir must not be higher than the top rim of the well holding the sponge.

Bookbinders' ruling ink, which is received in powder form, is used by Mr. Mallm. One tablespoon of the powder is dissolved in a gallon of lukewarm water which is sufficient to stripe 50,000 papers. The little reservoir on the striper is of 4 oz. capacity which quantity will stripe 4000 papers. The reservoir, however, can be refilled easily while the press is in operation with a battery filler instrument.

Before editions, when it is desired to change the ink from blue to red, or vice versa, the mechanism is removed from its bracket and is held under a running water faucet which cleans out all traces of the ink, so that another color of ink may be substituted.



View of Mallm newspaper page striping device. The striping disk operates entirely through frictional contact with the paper on the former.

Tri-State to Meet

The Tri-State Printers' Association, comprising the printers in the states of Nebraska, Kansas and Oklahoma will hold its annual meeting in Omaha, Neb., Saturday, May 24. Hotel Fontenelle will be headquarters.

This is a voluntary organization. Everybody, including ladies are welcome.

Present officers are: Bert Beals (Oklahoma City) Chairman of the Board; Charles Armstrong (Wichita) President; Vice Presidents: Marshall Crawford (Topeka), M. G. Cook (Lincoln) and Sid Rice (Tulsa). N. C. Leary (Omaha) is Secretary.

The day will be spent in discussion of vital subjects in the printing industry and addresses will be made by outstanding authorities on printing.

Added To Staff

A. Yates Dowell, Patents and Trade Marks, with offices at 1158 Munsey Bldg., Washington, D. C., has announced the addition to his staff of Charles H. Gray and Mabel K. Henderson. Mr. Gray formerly was Chief of the Assignment Division of the U. S. Patent Office. Mrs. Henderson was the wife of the late William T. Henderson, Chief Composing Room Machinist of the Washington, D. C., *Star*.

Linotype Personnel Changes

Harry L. Wilson, who has been a member of the sales-promotion department of Linotype's Southern Agency in New Orleans, has been transferred to the Chicago Agency, where he will continue his sales-promotion activities. E. T. Simpson, formerly of the field-service department of the Southern Agency, has been transferred to that agency's repair department.

"Hammond EasyKaster advantages would fill a book"

SAYS ERNEST TOWELL, VICE-PRESIDENT OF THE MILWAUKEE TIMES . . . . .

"I believe I could write a book on the advantages of our Hammond EasyKaster over our old hand-ladle type.

"I find your lock-up the best I have ever used or seen, since it is so simple to change from shell to type-high casting . . . a change required several times each day.

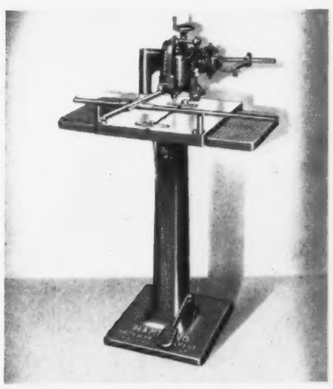
"The bed and back also lock nicely, giving an even thickness throughout the plate that leaves very little for the shaver to do. The mouthpiece is ample and yet not too heavy a flow for both full and small casts.

"All our men agree it is the best . . ."

And so will you . . . after you've experienced the simple ease of EasyKaster operation. Write for Bulletin today.

FOR SPEED AND POSITIVE CONTROL IN A ROUTER . . . CHOOSE HAMMOND

Hammond Routers are built to meet the demand for a *good* router at a medium price. Straight-line or radial-arm models both feature ultra-sensitivity . . . larger work table . . . more positive clamps. Beveling . . . straight-line routing . . . rabbeting . . . mortising, inside or out . . . they're all clean-cut operations on a Hammond Router. If you're Router-conscious right now write today for Hammond's completely descriptive folder.



R-3 HAMMOND RADIAL ROUTER

Hammond of Kalamazoo

HAMMOND MACHINERY BUILDERS, INC.

1604 DOUGLAS AVE. • • • KALAMAZOO, MICHIGAN

Eastern Branch — 71 West 23rd Street, New York City

Modern Poster Methods

— Photography now plays important part in offset-lith poster making to reproduce as natural a likeness as possible in four or five colors

By ADAM HENRI REISER

POSTERS have made steady advance in beauty. They serve a useful purpose in campaigns of public service such as messages of safety, appeals for aid, community drives, educational programs, and political messages. Chambers of Commerce use them to make the public conscious of America's benefits. Posters were used extensively during the last war. At present they play an important part in the defense program.

How are they produced? The method varies. There is the old hand-manner of drawing, for illustration, where the design is hand-drawn direct to the grained press-plate of either zinc or aluminum. Offsets are pulled from the first drawing, which contains as much of the total work or key lines as is practicable. The offsets are pulled over on to press-plates. Work for each color then is drawn upon its individual plate. Key lines of the offset on the plate form the limitations of the design, giving the artist definite indications which must be followed to secure register.

Work is drawn with crayon, tusche, pen, ruling pen, brush, air brush, and other means, depending upon the nature of the work. Tooth brushes and metal screening are used for spatter tints, the greasy medium — tusche — thus being put to the plate in the proper position. Uniform tints may be laid from film, or, created on the plate by applying crayon to the grain peaks. Solids are brushed in or daubed in with cotton and tusche. It must be remembered that work held by any particular press-plate always is governed by the color in which that plate is to be printed.

Photography plays an important part in poster making. Miniature reproduction of 26 in. by 38 in. movie poster produced by the Miller method. Camera work replaces in part the hand art work of the older lithographic methods. The poster is blown up from work on an 8 in. by 10 in. screened negative.

Process Poster Work

But, as in every field, improvement must be made continuously to meet competition. Competitive methods include metal posters, where aluminum is colored, making a magnificent display. In some instances, elaborate, cut-out figures feature the product. Los Angeles' colorful Wilshire Boulevard holds one of these unusual displays advertising swimming suits. Pictorial effects and the message are etched on aluminum in such a manner that sunlight seems to play tricks with the display as the bulletin is approached from different angles.

Often, however, customers request pictorial representations rather than hand art work. Thus the camera came into the poster field. Acting first as an auxiliary, the camera and photographic methods have been increased in scope until we now find photography playing a major part in the making of posters.

Today for the sake of expediency and cost, photographic enlargements are resorted to in production work. This runs from the photo-mural to the projection method, described in *Printing Equipment Engineer* some time ago. The photo-mural, incidentally, is making progress. One restaurant chain in New York has colored murals upon its walls. Henry D. Cotter tells of a panel 178 ft. wide executed for the United Fruit Line. This depicted scenes taken during a cruise of one of the company's liners from the time of departure from New York's sky line to its arrival at Havana.

Offset-lith's interest in the enlargement centers about methods such as used in one of New York's poster houses. The well-known offset-lith process artist, George Miller, developed this highly specialized method some years ago. Here, a 26 in. by 38 in. finished poster is blown up or enlarged from work on an 8 in. by 10 in. negative. Actual work on such a negative will not exceed 6 in. by 8 in. A projectograph, such as was developed by the late Frank O. Sullivan of gelatine printing fame, is used to shoot the work on to the press-plate.

Briefly, the method of working the poster consists of making four or five color separations, depending upon the job. These separations usually are made from the colored sketch through a 250 line screen, although up to a 400 line screen may be used. The screened, color separation negatives are dot-etched and stained in the accepted process manner.

Staining and Dot-Etching

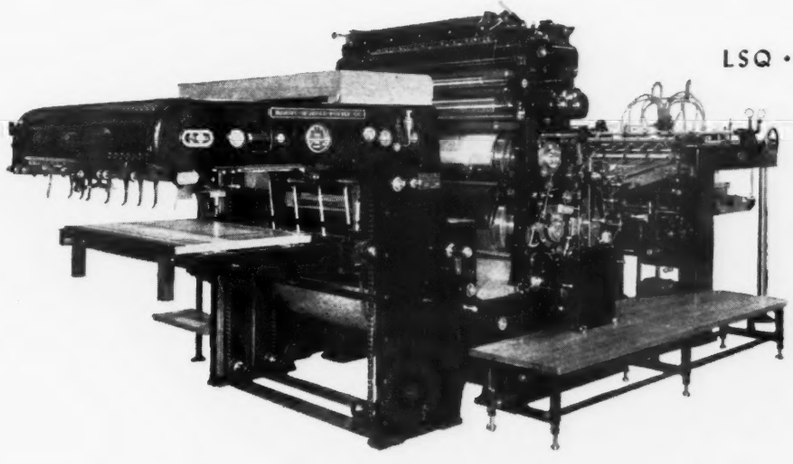
Staining on a negative has the net result of dot reduction on any kind of a print made from that stained negative. Staining is done with a brush using a black or red (vermillion) dye. The stain is reduced with water and applied lightly, successive applications building up the layer on the glass or film until a sufficient depth of shading has been attained. The amount of stain applied

Today

THE PRINTING CRAFTSMAN NEEDS THE FULL RESOURCES OF MODERN HARRIS OFFSET

With the swiftly changing scenes across today's business horizon, the printer needs every pressroom advantage. The demand for movement and drama in printed impressions can be satisfied only when all press facilities are made available.

The versatility as well as the quality of Harris-produced offset has made Harris the choice of those who know Lithography. Harris equipment accords the printer the full resources of modern offset.



LSQ • 26" x 40" • SINGLE COLOR

HARRIS

Litho Chemicals

Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS OFFSET PRESSES

·HARRIS·SEYBOLD·POTTER·COMPANY·

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 East 71st St., Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd St. • Chicago, 343 So. Dearborn St. • Dayton, 819 Washington St. • Atlanta, 120 Spring St., N.W. • San Francisco, 420 Market St. • Harris-Seybold-Potter (Canada) Ltd., Toronto, Montreal • *Factories:* Cleveland, Dayton

George Miller, well known New York offset - lith process artist.

determines the amount of light held back when a print is made from the stained work.

Conversely, dot-etching the negative will open the areas worked upon, yielding an enlarged dot on the print taken from the negative. Two main solutions are used in this process. Farmer's solution is the most popular of the two, but some still favor the iodine-cyanide solution. Variations of the two are employed, but two common formulae follow:

Farmer's Solution

Solution A: 1 hypo
10 water

Solution B: 1 potassium ferricyanide
10 water

Use 1 part B to (10 to 20) parts A, according to strength desired.

Iodine-Cyanide Solution

(Dangerous Poison)

1 oz. iodine solution
2 to 3 oz. cyanide solution
Water to make 32 oz.

Obviously, by working a combination of staining and dot-etching on a negative which has been shot to obtain a pinpoint dot in the highlights, a finished negative can be produced which will render a faithful reproduction of range of tones in the original. Better still, an open negative can be stained back to reduce the heavy areas, no dot-etching then being required. Such a procedure is a favorite method of Mr. Miller's for one-sheet posters and similar work. Albumin or deep-etched plates may be produced by the above methods simply by changing solutions and using a negative or positive.

In the minds of some, these process pictures are representative of improvement. By means of photography the subject now is depicted as nearly natural as possible. The signboards are easier on the eyes. Screen dots are not enlarged so much as to cause distraction. Four or five colors produce results that would give credit to color printing by older methods employing a greater number of colors.

In conclusion, here is a tip for the art apprentice from Mr. Miller. Despite all the mechanical features of present-day art work, Miller, an artist of repute himself, still feels that a good grounding in charcoal and oils is of tremendous help to the prospective litho artist.

Star Wheel Clutch permits permanent adjustment of assembler spring tension on line-composing machines — Fibre facing on friction disk

By H. R. CAPPS*

*Chief Machinist, Jacksonville (Fla.) *Times-Union.*

IN line-composing machine composition, transpositions are caused by faulty manipulation of the keyboard by the operator. Although the keyboard, magazine escapements, assembler entrance or chute finger may cause faulty delivery of matrices, the mal-adjusted condition of the assembler star wheel often is the cause of mechanical matrix transpositions, as well as "jiggling," "bouncing" and other erratic matrix actions occurring in the assembling operations.

The function of the assembler star wheel is to deflect matrices and spacebands as they enter the assembling elevator and stack them one by one in proper successive order in the assembled line. It is provided with a friction clutch that allows a slipping action in case of clogging or overset lines. This friction clutch has another important duty to perform, that of softening the impact of the star wheel against the incoming matrix or spaceband, which contributes to smooth and correct assembling.

The friction clutch should exert just enough pull on the star wheel so as to draw the matrix into place without hesitancy. Too much tension on the friction clutch, especially with a high speed star wheel, tends to advance the assembler slide too far to the left. When this occurs, the last matrix lays back against the star wheel, permitting the next incoming matrix or spaceband to enter on the left side of this last matrix, thereby entering the line in a transposed position. Excess spring tension also causes mats to "jiggle" or bounce from the assembling elevator, a condition which aside from being annoying to the operator, discourages fast, efficient composition and induces costly errors. To attain the best operating con-

(*Continued on Page 52*)

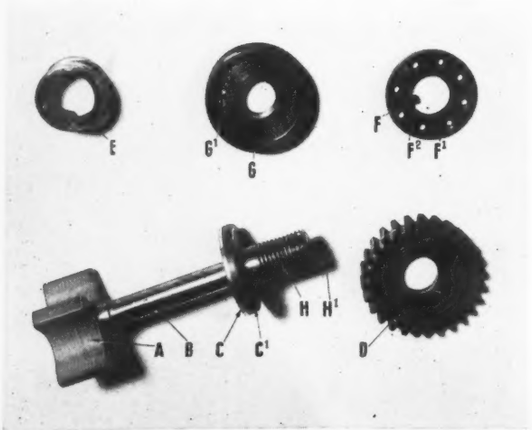


Fig. 1. — View of several component parts of adjustable star wheel friction clutch devised by Chief Machinist H. R. Capps of the Jacksonville (Fla.) Times-Union. *The following explanation is made so that our readers may more easily grasp just how the clutch parts function to permit slippage on an overset matrix line, how the adjustment for spring tension is made, why the adjustment is permanent, and just which parts have been added to standard machine parts.*

At a *is shown a standard four-prong fibre star wheel;* b *is a standard star wheel shaft;* c *is the regulation brass disk which is screwed on the threaded portion of shaft* b *in the regular manner until tightened against the shoulder where the 8/32 threaded portion terminates; the brass disk* c *has been recessed to permit the fitting of a red fibre inset disk, dimensions for which are shown at* c *in Fig. 2. The 3/8 in. diam. threaded sleeve* h *is screwed on the threaded portion of star wheel shaft* b *and a screw slot is provided to bring the sleeve tightly against disk* c. *It will be apparent later on in this explanation that the disk* c *and the sleeve* h *are mounted on the shaft* b *in an extremely tight and fixed position so that during the stress set up by the stoppage of the star wheel at the moment an overset matrix is impinged by the star wheel, the parts will not work loose.*

The next part to be assembled upon the shaft is the standard pinion d, *the brass or steel spring* e, *the ratchet disk* f *and finally the adjusting nut* g.

The ratchet disk f *is provided with a projection or tooth* f2 *which is positioned in a slot* h1 *in sleeve* h. *This prevents the ratchet disk turning upon sleeve* h *but permits lengthwise movement of the disk upon the sleeve against spring* e, *the pressure of which is regulated by adjusting nut* f *more or less as the nut is turned upon the screw threads of sleeve* h. *When the proper tension of spring* e *has been secured by turning nut* f, *a ball detent arrangement holds the adjusted position of the nut. The detent consists of a ball* g1 *embedded in adjusting nut* g. *The ball engages one of the holes* f1 *in disk* f. *Since the slippage of the friction disk takes place between disk* c *and* c1 *and driver pinion* d, *the adjusted condition of ratchet disk* f *and adjusting nut* g *cannot be made to slip by any sudden stopping of the star wheel at the time of an overset matrix line.*

UP TO 350 BOXES PER MINUTE-

POWER SHAFTS ON TIMKEN BEARINGS

Tapered Roller TIMKEN BEARING EQUIPPED

All of the stub shafts that transmit power to the various parts of the Staude "MASTER" All-Rotary High Speed Diagonal Gluing Machine are mounted on TIMKEN Tapered Roller Bearings. These are the points of hardest service as the shafts operate continuously and carry heavier loads than any other shafts in the machine.

Many different sizes and shapes of cardboard boxes can be produced on this machine. Photograph shows the machine set up for heavy kraft suit boxes, size 4" x 14" x 24".

TIMKEN Bearings keep the drive shafts turning smoothly at all speeds; hold them in correct and constant alignment; protect them against wear; carry all radial, thrust and combined loads surely and safely. They greatly increase machine endurance and dependability; decrease operating and maintenance charges.

When buying printing presses, box machines or auxiliary equipment of any kind ask this question; "Is it Timken Bearing Equipped"?

TIMKEN
TAPERED ROLLER BEARINGS

Manufacturers of TIMKEN Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; TIMKEN Alloy Steels and Carbon and Alloy Seamless Tubing; and TIMKEN Rock Bits.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

NEW HOME

(Continued from Page 18)

have their own racks of material, their own saws and proof presses.

All editorial communication with the composing room is made through the proof reader's desk, the point of outlet of the pneumatic tube and the station of the intercommunication system. The proof reader places the copy in a basket on the editorial dump table, where operators pick it up as they dump their type.

Stereotype Department

The equipment of the stereotype room consists of a 3 T. melting pot, equipped with Kemp immersion burner which carborates the natural gas and causes the flame to burn immersion-wise in tubes in the molten metal. The pot is equipped with a hand-operated pump for forcing the molten metal into a cylindrical casting box for the molding of plates from the mats. All metal pots are insulated with from 2 in. to 3 in. magnesia covering which eliminates excess heat in the room.

A metal remelt furnace and a water cooled molding machine for the casting of the pigs of composing machine metal, a plate finishing machine, router, saw and scorcher for finishing of plates comprise the other equipment of the stereotype department.

Pressroom

The 24-page Duplex Tubular press is located at the rear of the room in which the stereotyping is done. The press foundation is mounted on three inches of ground cork to eliminate vibration.

A new feature of this department is the illumination of the press — not by light bulbs dangling within it but by six flood lights from the sides and four from the ceiling.

According to Gilbert H. Chapman, superintendent of the stereotype-pressroom, the new lighting system on the press has worked "perfectly"; it has prevented pressmen suffering burns from accidentally contacting the hot light bulbs inside the press; and there has been greater efficiency because of the resultant light.

On the exterior of the building at the rear of the pressroom, an electric hydraulic lift is used for unloading rolls of paper to the basement for storage.

From the paper storage room to the press, the rolls are later brought up through an opening in the floor by an electric hoist.

Basement

The basement of the building is reached by a stairway from the west side of the lobby of the business office.

On the basement's east side is the Scioto Gazette Print Shop. It is headed by Albert Hafler. The job shop is equipped with three job presses, one Chandler & Price and one Golding platen and a Miller automatic. The presses in the job shop are mounted on cork foundation. In the center of the room is a Miller saw, proof press, Boston stitcher, punching machine, padding table, paper cabinet and four movable steel-topped compositor's tables. The walls are lined with type cases, stitching machine, file cabinets and galley cabinet.

Photo-engraving Department

To the rear of the job printing department, on the left from the central basement corridor is the photo-engraving plant. The room at the front of this department is the photographic studio, equipped with large banks of high-power fluorescent lights.

Adjoining it is the photo-engraving department, equipped with a large Robertson engraving camera, Robertson vacuum printing frame, stripping table and whirler; a dark room where both photographic and photo-engraving films are developed; and the etching room, where the zinc plates are finished. Stainless steel sinks are used in the dark room and the etching room.

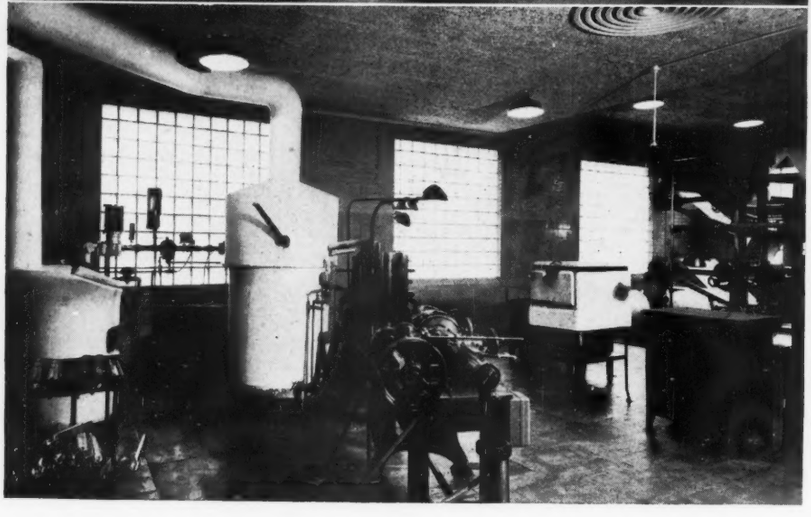
Other Basement Features

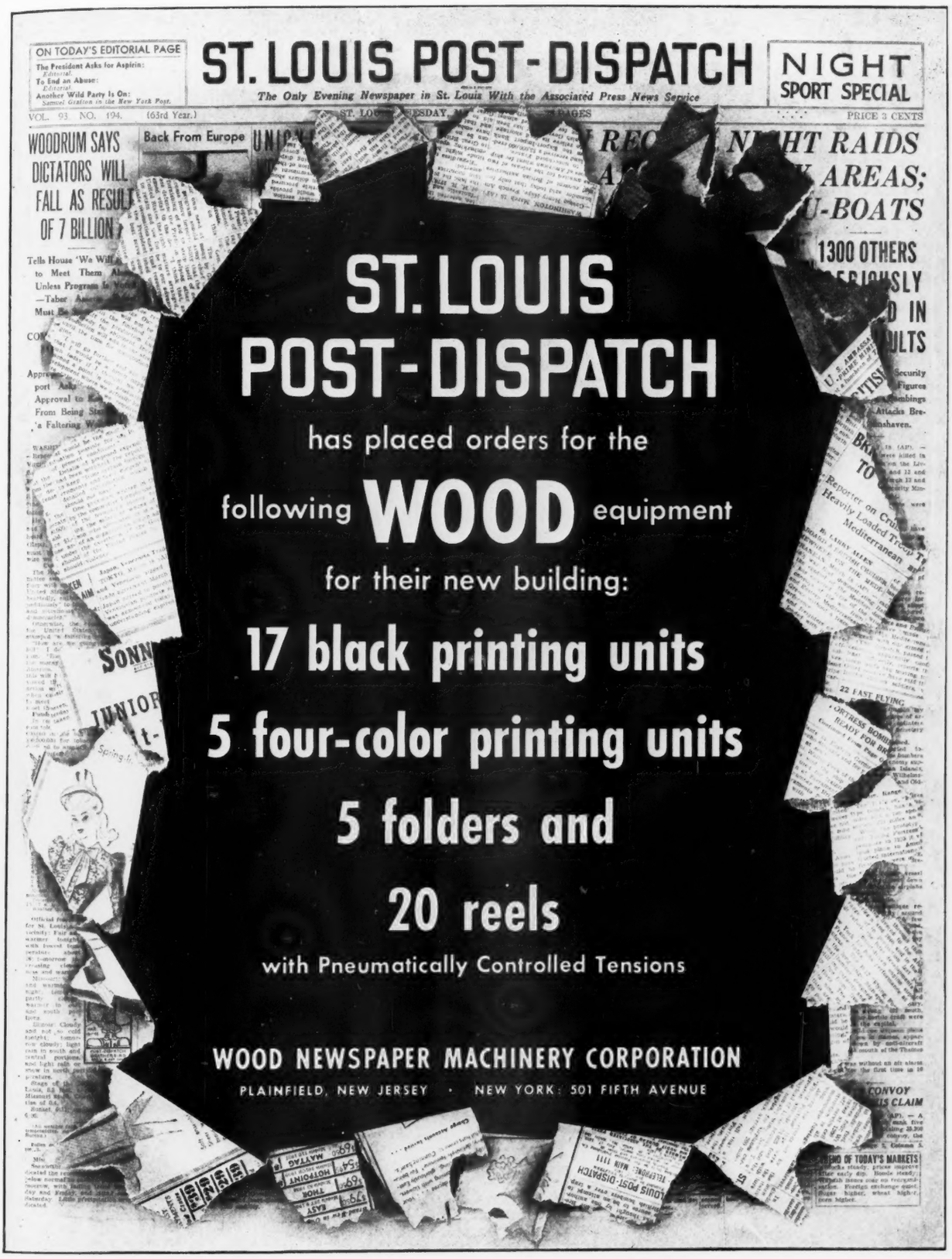
The air conditioning system, which actually consists of two large units, one for the office part and the other for the production portion of the building, will supply heated air during the winter and cooled air during the summer. The cooling is effected by means of a deep well pump capable of producing 200 gal. per min. Dehumidification in summer is obtained by means of a latest model Silica Gel unit.

The 36-burner gas boiler that supplies the heat is automatically controlled and needs no attention. An automatic water heater and air compressor supply is piped to the production areas.

View from makeup side of composing room in plant of Chillicothe (O.) Gazette *and* News-Advertiser. *This plant is operated double-header for morning and evening papers. Mostly, makeup tables are used with overhead fluorescent lighting. Floors are laid from end-grain fir wood block. Ceilings in composing, stereotype and press rooms are made of acoustical material which is formed from pressed sugar cane fibers.*

View in stereotype-pressroom department of Chillicothe (O.) Gazette *and* News-Advertiser. *The glass block windows are so constructed as to prevent glare. Up to a 6 ft. height the glass bricks reflect light downwardly, and above this line the light is reflected straight into the room. Metal pots are covered with magnesia to prevent excess heat radiation. At right rear may be seen one end of the Duplex 24-page Tubular Press.*




ST. LOUIS POST-DISPATCH
NIGHT SPORT SPECIAL
The Only Evening Newspaper in St. Louis With the Associated Press News Service
WOODRUM SAYS DICTATORS WILL FALL AS RESULT OF 7 BILLION
Back From Europe
1300 OTHERS
ST. LOUIS
POST-DISPATCH
has placed orders for the
following WOOD equipment
for their new building:
17 black printing units
5 four-color printing units
5 folders and
20 reels
with Pneumatically Controlled Tensions
WOOD NEWSPAPER MACHINERY CORPORATION
PLAINFIELD, NEW JERSEY · NEW YORK: 501 FIFTH AVENUE

TRENDS

(Continued from Page 2)

We have *two* alphabets. Indeed, we are cursed with them. We don't need two entirely different symbols for each letter sound: caps and lower case. But we have them, and I don't see any immediate chance of getting rid of them. Having to keep them, however, which of the two are we going to use? Fortunately, one of these alphabets is three to five times more legible than the other. It can be read three to five times more easily and comprehended more rapidly. Obviously, if this is a true statement (and you can prove it for yourself very easily) we want to set the important heads, the lines that index the contents of your papers for busy readers, just as legibly as possible, so that they may be read and comprehended quickly and easily. Upper and lower case heads are thus almost indicated in modern journalistic typography. I commend a change of lines now set in all caps to upper and lower case as one of the easiest moves to improve the typographical appearance of any newspaper.

The best newspapers in the country, typographically speaking, have an almost inflexible rule that no heads can be set in anything but upper and lower case. You can, of course, set an occasional feature head in caps, but it is safe to stick to the upper and lower case rule as consistently as possible.

The next question comes on what you might call streamlining. That is an odd word. If you stop the average newspaper man on the street and ask him what is meant by streamlining a newspaper, it is likely that he would be hard put to it to tell you just what this word means. Streamlining, I think means the re-study of all the features of a newspaper, with the convenience and time limitations of the customer or reader in view, and the adaptation of those features to meet reader-convenience. This is all there is to streamlining. The term is derived, of course, from the streamlined trains where the train as a whole, and the nose or front of the engine is so planned and shaped as to reduce as much as possible the air resistance when the train is in motion. All we do when we streamline a newspaper is to arrange the paper so that its printed features bore into the comprehension of the reader with the least resistance and with the greatest possible efficiency.

After we choose heads in upper and lower case, shall we have them counted or uncounted? I only wish that over the years, I had kept a scrapbook of the ludicrous heads written by head writers who were restricted to "not less than seventeen nor more than nineteen" letters in a line. Such rules have been responsible for many preposterous headlines. Certainly heads of this kind do not tell as accurately as possible what a story is all about. The uncounted head which stops approximately where it will tells its story as quickly and accurately as possible. Such heads certainly seem more logical. Incidentally, they also prove more effective and interesting to the eye, because they give the paper greater spottiness and variety, and do not contribute toward the making of a mass of gray matter across the page, which cannot help but be tiring to the eye. Uncounted heads comprising lines starting flush to the left are gaining in popularity all the time. I don't think any newspaper publisher who has tried modern heads would ever again go back to artificially counted heads where the copy is so contorted as to be not clearly understandable to the reader.

There is a style in typefaces as clearly as there is in architecture or in ladies' hats. You may tell me the average person does not know the difference between one typeface and another, and I will immediately grant that that is the case. But I will also claim that if you set a given piece of display copy in some obviously old and antiquated typeface, and then take the same layout and copy and reset it in a more modern, up-to-date, and better designed typeface, and lay the two proofs down before the most uninformed yokel, he will at once be able to tell you which one looks up-to-date and fresh and which appears old-fashioned and behind the times.

When modern typography was first coming in and I was actively interested in modern design, my little daughter was five or six years old. She would go along the street, see a building or a store window, and say "Daddy, that's modern, isn't it?" She could not have told you why, but she sensed unconsciously design that was in step with the times. There is nobody so far into the backwoods today that he or she does not recognize such differences. Unconsciously they know whether a product is of the vintage of 1941 or the vintage of 1890. So far as typefaces go, it is smart for us to travel in this year or this generation, instead of trying to honor grandfather and use types that he picked out thirty or forty years ago.

One thing we are learning rapidly, is to cut down the number of decks. We used to have heads with three, four, and sometimes more decks under them. These multitudinous decks were utterly unnecessary, because we are better off getting into the story promptly and telling it succinctly and directly. The best newspaper makeup today calls, I think, for one head and one deck, and very seldom any more. This practice simplifies the whole appearance of a newspaper and makes it cleaner and easier to deal with.

Please understand that variety is a necessity in our lives. We all get tired of monotony in any field, I care not what that field may be. For example, you may like spareribs, but if you are given spareribs for dinner every day for weeks on end, your taste would be likely to change. You may like the western prairies, but when you travel for a hundred miles in a direct line, over a straight concrete road, seeing nothing but flat territory you will get tired of it and you will relish a change of scenery. Everybody today needs a change of scenery. Therefore, in making up a newspaper, we do not want each column and each quarter of a page to look exactly like every other portion of the paper. So, we do not make up a newspaper today with five of the same kind of heads on one page and let it go at that. We try to get a variety of heads on any page, heads different in width, different in color, different in weight, yet all set in faces with a kinship in family so as to avoid having a hodge-podge. The best newspapers today show a change of pace across the page.

(To be Continued)

Miniature Reproductions of Front Pages, Prize Winners in Recent Inland Daily Press Association Contest for Typographical Excellence.

First Winner, Class A (Papers up to 5000 circulation) — *Carroll (Ia.)* Daily Herald.

First Winner, Class B (Papers from 5000 to 10,000 circulation) — *Idaho Falls (Ida.)* Post-Register.

CARROLL DAILY HERALD

Mixup Found In Numbers at Lottery's End

Rome Radio Claims 40-Mile Drive Into Greek Lines But Athens Says Line Holds--British Mining Harbors

Flames Destroy Fourth Floor Addition Of War Department Building In Night

The Post-Register

Greeks Hold Defense Line Stubbornly

Thomas Will Renew Drive For Reservoir

Willkie Assails Speeches By Ambassadors as F.D.R. Plans British Aid

War Bulletins

Britain Takes Over More Island Areas

Engine Drags Man To Death

Board Warns Dodgers

Draft Ends Minus Six

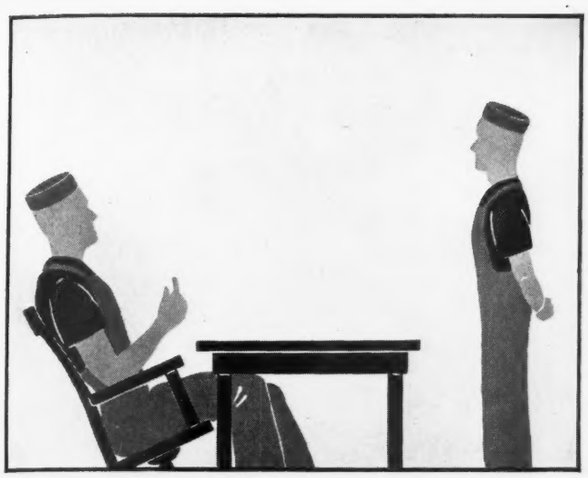
Advance in Greece Slow

Granges Hear Taylor

Gas Fight Leads To Death Of Ogden Mayor

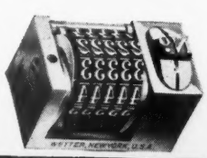
Burning Mishap Fatal

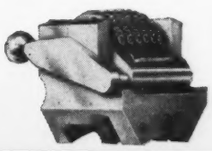
Greeks Resolved to Check Italian Invaders



THE KID REVIEWS
Numbering for Profit

- "Let's see what you remember about our last three lessons." First: "What kind of a frame should a numbering machine have?"
  - ★ "A one-piece frame machined out of solid steel."
- "Why?"
  - ★ "So it can't spring, warp or wiggle."
- "What happens when you get plunger-wobble?"
  - ★ "Impressions smudge."
- "How is plunger-wobble prevented?"
  - ★ "By using numbering machines with plungers working in a solid steel cylinder like a piston in an engine."
- "What's the best way to lubricate numbering machines?"
  - ★ "One squirt into a V-slotted shaft running right through the frame."
- "Kid, you look dumb but you sure remember what you hear." One more: "How do we know all these things are good?"
  - ★ "We number better with a Wetter."
- "Yes, and remember they last so long we forget the price."

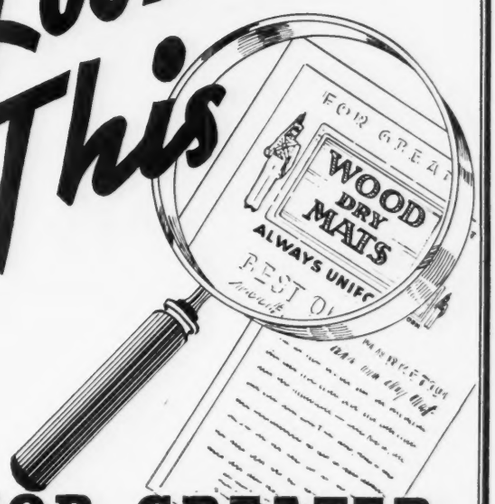




WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

283

Look into This



FOR GREATER *Dry Mat* SATISFACTION

No matter how exacting your mat requirements are, there's a Wood Dry Mat that fills the bill to perfection. Why not try a test batch and see for yourself why Wood Dry Mats are demanded by more than 300 stereo foremen. You can count on Wood for consistent quality and uniformity.

Always WOOD DRY MATS *Uniform*

WOOD FLONG CORP.
HOOSICK FALLS • NEW YORK

SEE this *Extra* Feature* of the DIAMOND POWER PAPER CUTTER

* New CHALLENGE Fluorescent Table Light and Tape Magnifier

. . . magnifies the figures on the duplex tape indicator . . . illuminates the table with a broad "daylight" beam—no dark spot at the cutting line. The large, powerful magnifier makes it easy to read the tape at any operating distance. Supplied for 110 volt, 60 cycle AC or 115 volt DC. Furnished with regular light bulb sockets for other currents. Available as extra equipment for new or old Diamond Cutters.

Diamond Power Cutters are made in three sizes: 30½, 34½, 36½ inches. Check **all** of their amazing advantages—send for the free book.

Challenge

THE CHALLENGE MACHINERY CO.

Main Office and Factory: GRAND HAVEN, MICH.

Eastern Sales Office: 50 Church Street, NEW YORK

GET THIS FREE BOOK

Contains complete data and illustrations of the Diamond Cutter with added details on the new Table Light and Tape Magnifier. Clip, sign, and mail this coupon at once! **No obligation.**

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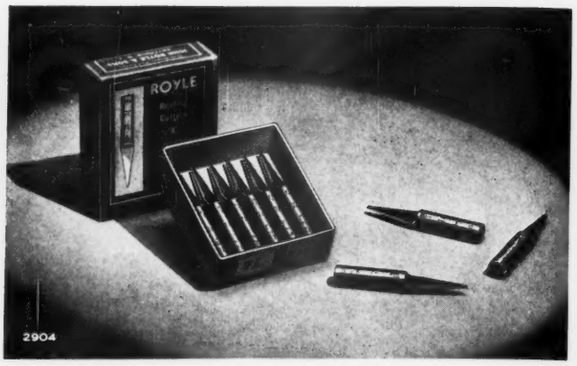
CITY ..... STATE .....

378



ROUTING CUTTER HEADQUARTERS

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper).

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. ***Order Direct Or Through Your Dealer . . . Be Sure It's a Royle.***

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.

YOUR NEEDS ARE OUR GUIDE
...THAT'S WHY MERCURY PRODUCTS are STARS!

TAILOR-MADE to specifications set forth by experienced pressmen in every type of plant, Mercury Rollers and Blankets are unusually adaptable to the widest variety of pressroom conditions. Never for a moment have we lost sight of the importance of checking every feature of these products against requirements of expert printing technicians. As a result, Mercury Rollers and Blankets are spectacularly economical in application, stand up sturdily over long periods of heavy usage, and provide the most accurate and uniformly perfect ink distribution obtainable. We welcome your comments at any time on ways of further improving our production or our services.

MERCURY ROLLERS

DURABILITY
CONCENTRICITY
QUALITY PRINTING
ECONOMICAL
EASILY WASHED
UNIFORMITY OF CONTACT

MERCURY BLANKETS

RESISTANCE TO TEAR
SAFEST MINIMUM STRETCH
OIL RESISTANT SURFACE
SUPERSMOOTH SURFACE
NO EMBOSSING
GREAT TENSILE STRENGTH

RAPID ROLLER COMPANY

D. M. RAPPORT, Pres. Federal at 26th Street, CHICAGO

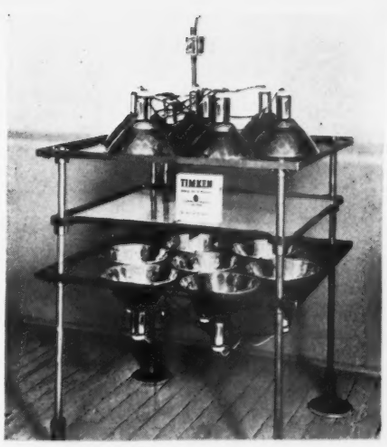
Three New Branches

Davidson Manufacturing Corporation has established three new branches, according to General Sales Manager Walter Strain.

The Washington, D. C. office, at 1210 18th Street N. W., is under the management of MacIntosh & Sheridan. In Hartford, Conn., the branch will be managed by Guinan & Walker, with offices and display rooms at 8 Ford Street. The Buffalo, N. Y. branch, located at 617 Main street, is in charge of Nichols & Van Winckel.

Electricity Gives Bearings Tight Press Fit

A NOVEL method has been developed for heating bearing cones preparatory to assembling them on shafts where a tight press fit is required. This device consists of three trays about 4 ft. square, approximately 12 in. above each other. The middle tray is of pyrex glass while the top and bottom trays each carry seven 250 w. special infra-red ray bulbs. The reflectors on these special bulbs are gold-plated.



Bearing cones are not taken out of the boxes, but are stacked in their containers. About 20 min. are required to heat a bearing up to a maximum of 155 deg. F. The infra-red rays penetrate the boxes, heat the steel, but leave the cardboard relatively cold.

When this method of heating is used, it is not necessary to wash off the protective coating which is put on the bearings at the time of packing.

Publishes Day Program

Rochester Athenaeum & Mechanics Institute, Rochester, New York, has published its 1941-1942 Day Program. In the prospectus are listed courses applicable to the Graphic Arts Industries. These are Illustration and Advertising Art, Photographic Technology and Publishing and Printing. These may be secured in full-time or cooperative plan. The Institute maintains a completely equipped printing laboratory. Copies of the calendar or program may be obtained from Registrar Alfred A. Johns.

When plates are made from Burgess Chrome Mats you can depend on the casting metal releasing readily - and that's important.
224
A Laboratory Product
BURGESS
Chrome
MATS
BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
FREEPORT ILLINOIS
Pacific Coast Representative
RALPH LEBER CO.,
426 Polson Bldg.,
SEATTLE, WASH.

VARIOUS CONFERENCES

(Continued from Page 21)

New England Conference

The third annual New England Newspaper Mechanical Conference will be held at Hotel Statler, Boston, on Saturday, Sunday and Monday, October 4, 5 and 6. Officers of the New England Conference are: President, Richard M. Fitzgerald of the Worcester (Mass.) *Telegram-Gazette;* Vice President, Bernard F. Garrity, of the Hartford (Conn.) *Times;* Secretary-Treasurer, Walter C. Crighton of the New London (Conn.) *Day.* Vice President Garrity is in charge of social get-together for Saturday night, October 4.

New Jersey Conference

AT a preliminary meeting held in Camden, New Jersey, on February 3, the New Jersey Newspaper Mechanical Conference elected Superintendent Elmer C. Pratt of the Camden *Courier-Post* as president, and named Superintendent John T. Arnold of the New Brunswick *Home News* as its new secretary-treasurer. The new association is being sponsored by the New Jersey Press Association through Executive Secretary Frank B. Hutchinson.

President Hutchinson has called a meeting for October 20 in Atlantic City. It is the intent of the conference to invite representatives from the weekly papers as well as executives from New Jersey dailies.

FORUM TYPE PROGRAM

(Continued from page 22)

mittee; and technical men from the Goss, Wood, and Hoe companies; a representative selected by the mat manufacturers; one representative of a company manufacturing direct pressure molding machines. D. H. Parker, of the Montreal *Star,* will preside, and will be assisted by F. W. Schaub, Decatur (Ill.) *Herald & Review*, and Leslie Griner, Youngstown (O.) *Vindicator.*

The Pressroom Forum will be composed of three newspaper pressmen (from small, medium-sized, and large papers); a stereotyper chosen by the stereotype subcommittee; and engineers from the Hoe, Wood, Scott, Duplex, and Goss companies; one engineer, each, selected by the newsprint manufacturers and the ink manufacturers. The chairman will be Walter Ogden, of the Cleveland *Press*, who will be assisted by A. H. Burns, New York *Herald Tribune*, and John J. Shea, Hearst Newspapers, New York.

At the Engraving Forum there will be three photo-engravers (from small, medium-sized, and large papers); an art man with a knowledge of newspaper printing a press photographer; and technician from such supply companies as Chemco Eastman Kodak, and Johnstone Electric. The subcommittee in charge of this session consists of Don P. Miller, Allentown (Pa.) *Call-Chronicle;* Maurice Hagan, Philadelphia *Inquirer;* and George Geist, Cincinnati *Times-Star.*

The Wednesday afternoon session will be devoted to problems of advertising agencies — black and white, color, and rotogravure. The program for this session will be arranged by the Committee in charge, consisting of John W. Park, Chicago *Tribune;* Tennant Bryan, Richmond (Va.) *News Leader* and *Times-Dispatch;* and F. L. Yeager, Indianapolis (Ind.) *Star.*

Etching Machines

Bulletin No. 606, illustrated, has been published by The U. S. Stoneware Co. In it is described the Turbinaire etching machine for photo-engravers.

Printing Metallic Inks

S. D. Warren Company has published a miniature portfolio containing a booklet entitled *The Printing of Metallic Inks on Glossy Coated Papers*, and 7 specimen sheets of Warren papers containing large blocks printed in gold ink. In the booklet are discussed technical details related to gold ink printing. On each of the 7 sheets, production data is printed telling how the gold ink was handled.

PRINTING PATENTS REPORT

Covering Patents Issued February 25, March 4, March 11, March 18

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,234,044. APPARATUS FOR REMOVING PLASTIC BINDINGS FROM A MANDREL about which a series of spaced rings comprising a part of the binding have been formed, comprising a pair of supporting strips from which extend stripping plates spaced from each other a distance equal to the spacing between the binder rings, in such a manner that the stripping plates are supported perpendicular to the axis of the mandrel and engage the binder rings as the mandrel is withdrawn. Invented by Charles E. Emmer, Chicago, Ill. Assigned to Cerela, Inc., Chicago, Ill. Application July 10, 1939. 13 claims.

2,234,045. OPENER FOR PLASTIC BINDING ELEMENTS comprising a smooth round-edged blade having a body portion of even width and a tapered end portion, one edge of the tapered end being in the same line as one edge of the opener body. Invented by Charles E. Emmer. Assigned to General Binding Corp., 227 So. Green St., Chicago, Ill. Application September 8, 1939. 7 claims.

2,234,401. BINDING for books, pamphlets, catalogs, etc., and method for making. The binding is characterized by provision of apertures in the back strip joining the two cases of the book, etc., the pages being provided with tongues inserted without deformation through the apertures in the back strip and held in place without additional members. Invented by Emil N. Farkas and Frank F. Farkas, Chicago, Ill. Unassigned. Application August 22, 1938. 11 claims.

Composing Room Equipment:

2,232,732. APPARATUS FOR ASSEMBLING, SPACING, ALIGNING and fastening together individual character composing units bearing various indicia for the purpose of forming sentences or designs suitable for photo-mechanical reproduction. Invented by William H. Rogers, Washington, D. C. Unassigned. Application December 23, 1937. 5 claims.

2,232,924. SORTS MATRIX RACK FOR TYPOGRAPHICAL MACHINES whereby at least as many different groups of sorts as there are matrix fonts or magazines on the machine will be available to the operator with absolute certainty as to which of the different fonts they supplement. Invented by Robert L. Miller, Cranston, R. I. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application November 26, 1940. 7 claims.

2,234,528. DOUBLE SIDED FLUID-COOLED INGOT MOLD designed to be rotated or oscillated for dumping, characterized by a novel arrangement of cooling fluid passages. Invented by Albert H. Jung, Flushing, N. Y. Assigned to United American Metals Corp., 202 Diamond St., Brooklyn, N. Y. Application July 8, 1939. 9 claims.

2,234,898. MELTING POT AND METHOD for melting a mass of solid frozen metal. The method includes the steps of melting a portion of the solid metal in contact with the bottom of the pot, and heating a molten metal passage leading from the melted portion, in such a manner that the melted part may expand and pass through the passage into direct contact with the exterior of the unmelted part of the solid metal. Invented by Henry Hartmann, Brooklyn, N. Y. Assigned to United American Metals Corp., 202 Diamond St., Brooklyn, N. Y. Application October 31, 1940. 5 claims.

2,235,464. TYPOGRAPHICAL COMPOSING MACHINE employing a plurality of magazines and a novel extensible arm structure for spreading the magazines and for separating from its base frame the magazine to be removed. Invented by Richard H. Scott, Enfield, England, and William F. Gorse and Arthur S. Hayward, Altrincham, England. Assigned to Linotype & Machinery Ltd., London, England. Application February 9, 1940. 24 claims.

2,235,482. SLUG CASTING MACHINE characterized by mechanism to be adjusted to cause the machine to operate continuously for a plurality of cycles to cast an infinite or selected number of duplicate slugs. Invented by Paul Hilpman, Garden City, N. Y. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application January 31, 1940. 32 claims.

Feeding, Folding, Delivery:

2,233,015. TENSION WINDING CONTROL for moving webs, cords or wires, particularly applicable for controlling the tension of the paper web fed to a rotary printing press. The system includes a follower for the web, etc., arranged so that variation in tension moves the follower, which in turn actuates a brush over a distributor to selectively operate either an electric circuit for increasing feeding speed, or a magnetic brake, etc., for decreasing feeding speed. Invented by Edward Douglas Kassell & James W. Wilkinson Walton, London, England. Assigned to J. H. Holmes & Co. Ltd., Hebburn/Tyne, England. Application October 11, 1939. 13 claims.

2,233,793. FOLDING MECHANISM FOR PRINTING PRESSES providing the folder with both packer and traveling endless carrier deliveries, these deliveries being preferably arranged side by side across one or both ends of the folder. The arrangement permits heavy products to be delivered to the packer deliveries and light products to the traveling endless carriers. Invented by Joseph E. Meyer, Westerly, R. I. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application January 4, 1939. 22 claims.

2,233,850. APPARATUS FOR DELIVERING NEWSPAPERS FROM A PRINTING PRESS in batches, wherein the newspapers are first arranged on the conveyor at longer intervals than those required and the intervals are subsequently shortened by the papers catching up with, and being checked by, spaced teeth moving in a straight line beside the conveyor. Invented by Harold H. Rapley, Bedford, England. Assigned to Cutler-Hammer, Inc., 1333 W. St. Paul Ave., Milwaukee, Wis. Application January 7, 1939. 4 claims.

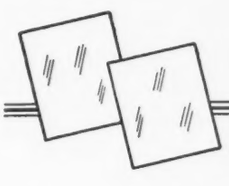
2,233,922. SHEET CUTOFF AND FEEDING MECHANISM providing means for maintaining each sheet in motion and under continuous control from the time it is severed from the web until it is taken by the press to which it is being fed. Invented by Christen R. Kaddeland, Shelton, Conn. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio. Application January 5, 1938. 18 claims.

2,233,934. CYLINDRICAL VALVE FOR SHEET HANDLING MACHINES having means for controlling the suction and air blasts comprising a single rotary valve

(*Continued on Page 46*)

FOR strong advertising pull and hard hitting attention value, advertisers insist on flawless reproduction . . . and flawless reproduction calls for flawless engraving plates. That's why the majority of important photo-engravers in the United States insist upon Zomo-Electric Zinc and A-Z Alloy. These metals, melted and cast in the Electric Induction Furnace have a uniformity and unsurpassed quick, clean etching quality. Zomo Electric Zinc for all regular work, A-Z Alloy for heavy mat work and long direct press runs.

You can order Zomo Electric Zinc and A-Z Alloy—plain or Backoted —from leading metal suppliers in the United States and Canada.



ZOMO ELECTRIC ZINC
A-Z ELECTRIC ALLOY

consisting of a rotor adapted to be turned in a stator or housing, the rotor having at least two transverse passageways arranged to cooperate in certain positions of the rotor with ports in the stator. The ports, arranged in communication one with the other, are appropriated one to suction and one to pressure. Invented by Headley T. Backhouse, London, England. Unassigned. Application January 4, 1936. Renewed June 19, 1940. 3 claims.

2,233,935. SUCTION TYPE SHEET FEEDER employing as a novel element the valve described in Patent Number 2,233,934. Invented by Headley T. Backhouse, London, England. Unassigned. Application June 7, 1939. 15 claims.

2,234,116. SHEET STACKING APPARATUS designed to regulate delivery of individual sheets successively produced from a traveling web, and to receive the delivered sheets in such a manner as to build successively segregated individual stacks. Invented by William F. Grupe, Lyndhurst, N. J. Assigned to Champlain Corp., 61 Outwater Lane, Garfield, N. J. Application March 12, 1938. 17 claims.

2,235,347. PILER END STOP for use in combination with a sheet feeding apparatus to effect accurately aligned piling of the sheets fed by the apparatus. It is claimed that the apparatus requires no manual operation. Invented by Walter A. Zahutnik, Gary, Ind. Unassigned. Application April 15, 1939. 2 claims.

Miscellaneous:

2,232,664. PRINTER'S BLANKET comprising a matrix of resilient material and having substantially uniformly distributed throughout its working surface a multiplicity of indentations acting as reservoirs for excess ink, the walls of the indentations containing sufficient individualized organic fibres to strengthen them against collapse under printing pressure. Invented by Stephen B. Neiley, Winchester, Mass. Assigned to Dewey & Almy Chemical Co., North Cambridge, Mass. Application April 14, 1937. 6 claims.

2,234,183. LIQUID INK FOR PRINTING WALL PAPER comprising soya bean flour in water, a soap, pine oil, a pigment such as clay, and water glass. Invented by F. V. Lofgren, Valparaiso, Ind. Assigned to Glenn Davidson, Aurora, Ill. Application March 15, 1937. 9 claims.

2,235,250. MACHINE FOR COATING PRINTER'S ROLLERS providing improved means for rotating a single roller or a plurality of rollers, as well as mechanism for feeding the pan or composition applying mechanism uniformly, without chatter or vibration during the coating operation, to avoid formation of ripples or similar imperfections in the finished product. Invented by Carl G. Bingham, Highland Park, Paul Fernekes, Arlington Hts., and William Wanner, Wilmette, Ill. Assigned to Sam'l Bingham's Son Mfg. Co., 636 S. Sherman St., Chicago, Ill. Application May 2, 1938. 12 claims.

2,235,676. OFFSET PREVENTING COMPOSITION for application to freshly printed sheets, characterized by containing as a novel carrier for the usual constituents a non-adhesive hydrogel such as bentonite. Invented by Herbert F. Gardner, Chicago, Ill. Assigned to Stein, Hall Mfg. Co., 2841 So. Ashland Ave., Chicago, Ill. Application Sept. 22, 1939. 10 claims.

2,234,727. METHOD OF LETTERPRESS PRINTING claimed to eliminate "picking," to increase the life of the printing rollers, and to decrease the amount of ink required, including the step of applying to the printing ink, just prior to the transfer of the ink to the printing surfaces, a suspension in the form of a fine spray, portions of this suspension being non-miscible with the ink and transferred thereby to the paper, and the remainder being miscible with the ink. Invented by Philip A. Frazier, Oak Park, Ill. Unassigned. Application May 6, 1938. 15 claims.

Plate Making:

2,233,546. ETCHING OF NICKEL in photomechanical processes and the like, characterized by the use of cupric chloride solutions as novel etching agents. Invented by Charles E. Meulendyke, Rochester, N. Y. Unassigned. Application May 24, 1939. 5 claims.

New
Magnified — Shows air vents which permit escape of steam and which expedite drying. Thru these perforations more glue is exposed to the air and the felt dries quickly and sets permanently.
IT TEARS EASILY at the holes to any length . . . . like postage stamps . . . .
The Old Way
When ordinary felt is heated the moisture on the adhesive generates steam which forces the felt to part at the bond and lift from the mat.
The New Way
Ventilated Felt allows the steam to escape through air vents, thus the adhesive dries quicker and the bond is positive.
VENT-A-FLEX
IT'S SELF-VENTILATING
the greatest improvement in matrix backing since the advent of ready gummed felt
GUMMED PACKING FELT
MORE FLEXIBLE
Make This Test
Wrap a strip of ordinary felt around your finger. It will crack and spring out straight again when released.
Ventilated Felt is pliable as linen, curves easily without cracking and stays in place.
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2,233,573. COMPOSITION FOR COATING LITHOGRAPHIC PLATES to protect the image thereon and increase the sharpness of the impression, comprising a water solution of sodium silicate with or without cream of tartar. Invented by Arnold L. Ayers, Omaha, Nebraska. Assigned to Albert E. Tyler, Omaha, Neb. Application January 7, 1939. 12 claims.

2,233,791. TRANSFER SHEET for shading surfaces, characterized by a novel transferable coating comprising ester gum, linseed varnish, carbon black, carnauba wax and orange toner. Invented by Theodore L. Maddock, Cleveland, Ohio. Assigned to Fine Art Mfg. Co., Cleveland, Ohio. Application November 23, 1938. 2 claims.

2,234,064. METHOD AND LAMINATED MATERIAL FOR PRODUCTION OF SILK SCREENS for printing. The laminated material comprises a carrier sheet and, adhesively jointed thereto, film layers of cellulose ester base and cellulose ether base composition. Invented by Joseph Ulano & Harry Friedman, Brooklyn, N. Y. Assigned to Nu-Film Products Co., Inc., New York, N. Y. Application July 26, 1939. 5 claims.

2,234,133. CONTRAST IMAGE FOR USE IN PRODUCING PRINTING PLATES, and method for making such images. The contrast image consists of rows of elements in each of which the ratio of black area to white area corresponds to the value of the tone of the corresponding area of an original, the lengths of the elements representing each tone being different in adjacent rows. Invented by Morris Sorkin, New York, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application October 4, 1940. 4 claims.

2,234,170. PRINTING PLATE BENDING MACHINE having special means for qualifying the length of the plate plus its clamping bars before bending the plate, and to positively locate the position of the bend relative to the printing design on the plate. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., E. River & 138th St., New York, N. Y. Application September 2, 1936. 19 claims.

2,234,189. PRODUCTION OF ZINC PRINTING PLATES by cleaning the back face of the original plate with an aqueous solution containing monochloracetic acid, and then suspending the plate in a bath containing an excessive amount of chromic acid at 140° F., and by electrolysis permanently depositing on the back face of the plate a thin layer of chromium to be used in place of the usual backing materials while the characters are being etched on the face of the plate. Invented by John J. Murray, Arlington, Mass. Unassigned. Application August 28, 1935. 20 claims.

2,234,997. METHOD OF PHOTOMECHANICAL REPRODUCTION characterized by use of a plate having its working face formed as a multiplicity of minute cones. Invented by Francisco G. Yanes, New York, N. Y. Unassigned. Application March 8, 1939. 17 claims.

2,235,148. METHOD OF MANUFACTURING RUBBER PRINTING PLATES including the steps of vulcanizing a plate of hard rubber, positioning the hardened plate between a matrix and a cushioning body of unvulcanized soft rubber, and applying heat and pressure to this assembly to render the vulcanized plate plastic to receive an impression from the matrix and simultaneously vulcanize the soft rubber body to the hard rubber plate. Invented by Robert D. Gartrell, Oakland, N. J. Assigned to U. S. Rubber Co., 1232 Sixth Ave., New York, N. Y. Application April 3, 1936. 3 claims.

Printing Presses and Equipment:

2,232,989. TOP SHEET or draw sheet for supporting a sheet to be printed in printing apparatus, comprising a sheet of hard, unyielding paper coated with a tough, resilient film of plastic material comprising a synthetic resin. Invented by Charles E. Wooddell, Niagara Falls, N. Y. Assigned to Carborundum Co., Niagara Falls, N. Y. Application May 19, 1936. 8 claims.

2,233,076. ROTARY INKING MECHANISM FOR FAST ROTARY PRESSES providing a simplified construction to vibrate an ink drum, and including a mechanism actuated by the rotating and vibrating shaft for reversing the actuating mechanism. Invented by Hobart N. Durham, Manhasset, N. Y. Assigned to Goss Printing Press Co., 1535 So. Paulina St., Chicago, Ill. Application January 28, 1939. 6 claims.

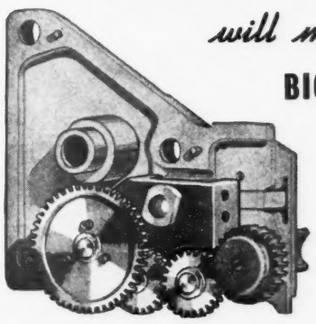
2,233,099. FLAT BLOCK PRINTING OR DECORATING MACHINE comprising a plurality of printing blocks for applying a base and variegating paints to the surface of a web to be decorated, characterized by a novel brush mechanism for treating paint applied to the web. Invented by Charles F. Humphreys, Lancaster Township, Pa. Assigned to Armstrong Cork Co., Lancaster, Pa. Application July 21, 1937. 10 claims.

2,233,210. MOISTURE DISTRIBUTING MECHANISM for lithographic printing machines, characterized by a new mechanism for automatically varying the speed of the moistening apparatus at a lesser rate of change than the rate of any change in speed of the machine. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., E. River & 138th St., New York, N. Y. Application December 23, 1938. 14 claims.

2,233,211. POWER PLATE INTAGLIO PRINTING PRESS having a novel anti-friction bed supporting means for carrying the bed along the ways. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co.,

(*Continued on Page 48*)

A COOK SLOW SPEED ASSEMBLER UNIT



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CHROMALOX HEATING UNIT

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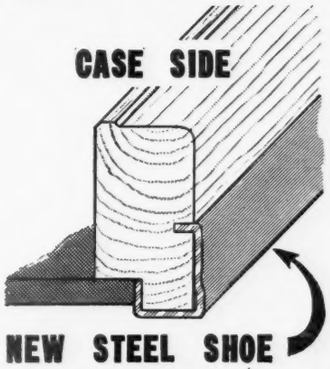
Announcing HAMILTON STEEL SHOE CASES AT NO EXTRA COST

Operate Easier... Last You Longer



NOW, at no extra cost, you get the new easy-running, long-wearing Hamilton Steel Shoe on all standard Hamilton Type Cases. The Steel Shoe on the bottom of each case can't wear out as easily as wood because it's made of heavy steel.

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THESE SNEAK THIEVES
★ For 28 years the Imperial Type Metal Company has been a bulwark against these sneak thieves—High Dross Loss and Bad Slugs and Plates. These expensive burdens operate where the type metal is not in proper balance—not casting at minimum temperatures. Imperial and the Plus Plan protect the user from these unnecessary expenses—insure minimum casting temperatures by controlling the metal supply within safe limits.
Perfect balance, lower temperatures and low drossing mean less metal trouble—less production loss—lower fuel bills. That's what you avoid by putting up that wall.
Find out all about the Plus Plan—get the complete picture from an Imperial service man of the savings possible when you use—
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IMPERIAL TYPE METAL CO.
Philadelphia • New York • Los Angeles • Chicago
PLUS PLAN
HIGH DROSS LOSS
BAD SLUGS & PLATES

Inc., E. River & 138th St., New York, N. Y. Application July 22, 1939. 9 claims.

2,233,217. FLAT BED WEB PRINTING PRESS comprising a frame supporting impression and forming mechanisms, means for feeding a web past these mechanisms, and an imprinting device in operative alignment with the forming member and driven in synchronism with the web. Invented by William L. McCarter, Portland, Oregon. One-half assigned to C. H. Farrington, Portland, Oregon. Application May 6, 1939. 12 claims.

2,233,357. ROTARY PRINTING APPARATUS for use in "cold set" printing with "thermo-fluid" ink, comprising a printing cylinder with heating mechanism therefor, and an impression cylinder adjacent to the printing cylinder and provided with a smooth, finely-woven, heat resistant fabric. Invented by Frank G. Breyer, Wilton, Conn. Assigned to J. M. Huber, Inc., 460 W. 34th St., New York, N. Y. Application July 11, 1940. 7 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D. C.

2,234,726. ROTARY PRINTING PRESS wherein the size of the plate cylinder may be readily changed without rebuilding the press. Invented by Philip A. Frazier, Oak Park, Ill. Unassigned. Application May 24, 1937. 18 claims.

2,234,754. INK FOUNTAIN MIXER AND AGITATOR of the type used for mixing chemicals in offset presses. The invention provides a cone-shaped revolving mixer and agitator which, while treating the chemicals, maintains a continuous flow of the ink to the fountain roller. Invented by William Gegenheimer, Baldwin, N. Y. Unassigned. Application November 25, 1939. 12 claims.

2,235,063. FRAME and pinning mechanism for securing and stretching textiles during printing by the silk screen process. Invented by Ralph E. Bitner, New York, N. Y. Unassigned. Application May 29, 1940. 8 claims.

2,235,096. APPARATUS FOR MACHINING OR UNDERCUTTING THE EDGES OF DOUBLE TRUCK PRINTING PLATES for matching purposes, comprising a support for the plate, a tool carrier adjustable toward or away from the edge of the plate, and carried by the tool carrier a plurality of circumferentially spaced cutters which, upon rotation of the tool carrier, move successively into the edge of the plate to produce an undercut. Invented by William E. Becker & Charles S. MacIntosh, Washington, D. C. Assigned to The Washington Post, 1337 E. St., N. W., Washington, D. C. Application February 17, 1937. 17 claims.

CHANGING OVER

(Continued from Page 24)

other words, the reader's vision does not tend to read clear across the column rule into the next column when the extra 1 pt. white space is provided on the ends of the slugs.

The head-letter machine, however, was not changed, as the draw on the characters immediately adjacent to either end of the slug permitted plenty of white space next to the column rules. Head-letter faces in the larger sizes also permit butted slugs for 3 column and larger heads. If the 1 pt. indention were provided on the head slugs a "gappy" white space would appear between the butted slugs.

For the 9 pt. slug, 8¾ pt. liners are used to permit a 9 pt. trim through the ribs of the slug without "biting" into the body of the slugs that come from the slightly warped older molds. We found the "bite" into the body of the full 9 pt. slugs on trimming caused an almost imperceptible hesitation of the machine, resulting in some transpositions in the

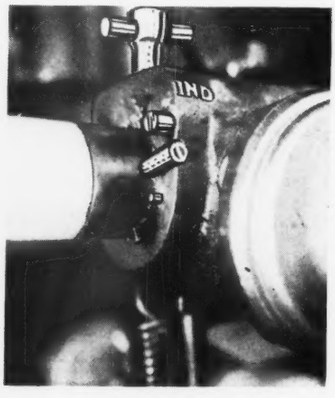
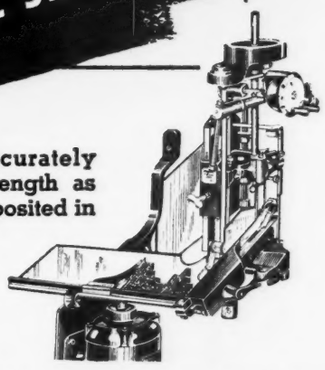


Fig. 3. — View of left-hand side of Intertype vise, equipped with Mohr Lino-Saw and Autospacer. Make lever and stop studs same as for Linotype left-hand jaw shown in Fig. 1, except that the lever turns to the left for indent and to the right for flush. A pin is set through W-2558 vise closing nut locking screw for easier loosening and tightening.

Right-hand Jaw Adjustment for Intertype Equipped with Autospacer — *Several devices were experimented with for quick change to 1 pt. indention or flush, but because of limited working space it was decided to set the right-hand vise jaw with a screwdriver, turning the screw in about one-half turn for 1 pt. indention and vice versa for flush. To allow for 1 pt. indention, it may be necessary to adjust the autospacer vise jaw rack to permit the left-hand jaw to lock on return to normal position after a quadding operation.*

100% AUTOMATIC SLUG SAWING



Odd-measure slugs accurately sawed to the desired length as they are ejected, and deposited in the galley ready for immediate use. It's automatic — 100%. Just a turn of the dial gives you the exact measure you want. No hand-sawing — no extra handling. Used by progressive composing rooms everywhere.

ECONOMY - EFFICIENCY ACCURACY

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Every Plant Needs Them

TRY THE SENSATIONAL

Zephyr BLACKS

These inks represent a complete new chemical achievement. Based on the principle of polymerization, they are unlike any other product on the market.

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- **BACK UP *in 30 minutes.***
- **BONE DRY *in an hour.***
- **ZEPHYR BLACKS *are perfected in three grades.* Available for practically any job.**

Try Them Out. **For folder, or trial order,**
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Now in use from Coast to Coast

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Announcing

Black Rubber Rolls

for Line-Composing Machine Keyboards

The E. A. Booth Rubber Company now announces a new rubber roll for line-composing machine keyboards. When properly applied to the

shafts these crepe finish rolls provide positive traction with maximum resiliency so that cam action is uniformly dependable. These new black rolls are non-blooming, withstand composing room temperature extremes, are made tough to withstand cutting action of the cams, are of *uniform diameter*, and grip the shaft like a glove. Tough as a pig's snout.

Because of large volume production with improved quality we are enabled to offer these rolls at *$1.10 per pair; $6 per dozen.*

Order a trial pair, try them for 30 days, and if they do not please you the trial pair will cost you nothing.

Booth's Zink Cut Cement fastens all kinds of cuts to wood or metal base. 75c per large tube; $6 per dozen tubes; $5 per dozen in gross lots — U. S. prices only.

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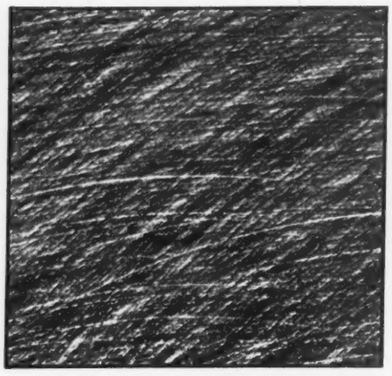
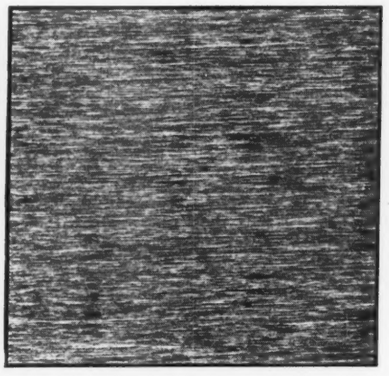
NO DEEP SCRATCHES



Photograph (magnification 4 X) of Roto-Grip Finish showing finishing scratches running in every direction.



Photograph (magnification 4 X) of surface produced by old polishing processes. Scratches run in one direction only.

Old fashioned finishing makes deep parallel scratches. There are no deep scratches in Roto-Grip — none as deep as the engraver makes in ordinary pumice cleaning. In the old type polishing process every scratch and hollow is deepened with every step. In Roto-Grip every scratch is of uniform extremely shallow depth and crossed and recrossed to form a perfect "tooth" to grip enamel.

ROTO-GRIP

EDES ROTO-GRIP FINISH ZINC

Roto-Grip is smoother, more uniform, gauge accuracy guaranteed within one half of one thousandth of an inch. Makes better plates faster.

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PLYMOUTH, MASSACHUSETTS, U. S. A.

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NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co.
WASHINGTON, D. C.: E. H. Walker Supply Co
RICHMOND, VA.: E. H. Walker Supply Co.
BOSTON: Allan B. Croke Co.
BUFFALO: C. S. Illingworth
DETROIT: Eaton-Clark Co.
CINCINNATI: G. C. Dom Supply Co.
AKRON: Metzger Photo Supply Co.
SAN FRANCISCO: J. W. Feinstein
ATLANTA: Chemco Photoproducts Co.

DENVER MINNEAPOLIS TULSA WICHITA MEMPHIS
DALLAS OMAHA KANSAS CITY SAN ANTONIO
OKLAHOMA CITY DES MOINES HOUSTON
Thompson-Hayward Chemical Co.

assembler, hence the change to smaller liners with smoother ejection.

The *Journal* line-casting equipment consists of 14 Linotypes and 6 Intertypes. Eight machines are fitted with Mohr Lino-Saws. Three Intertypes are equipped with Autospacers. Fourteen machines, including the headletter, are in the news line and six are in the ad alley.

Straight-Matter Machines

On the line-composing machines which are used solely for straight-matter work, it was a simple matter to adjust the vise jaws inwardly 1 pt. by means of the screws provided for that purpose. A 1 pt. hair space was used to check indentions so all of the straight-matter machines produced similarly indented slugs.

To provide a gauge for setting the assemblers on the straight-matter machines alike, a discarded 12 pt. liner was cut down to 11 picas, 10 pts. length. This is inserted between the assembler slide finger and a horizontally positioned star wheel spoke.

The screw holes in the assembler slide em scales and the scales for the vise jaws on the news machines were elongated so the scales could be positioned to read exactly 12 picas. Although the type face on the slug actually is 2 pts. shorter, the operator sets his measures as before, the machine automatically taking care of indentions on any measure. No operator confusion whatever has resulted.

Ad Machines

Frequently, Mr. Oberg needs some of the ad machines to help meet the deadline on news matter. That means changing the jaws for 1 pt. indention and then setting the jaws back to flush for ad work.

To provide a means for the ad operators to make vise jaw adjustment changes from flush to indent and vice versa, the simple levers and stop studs shown in the illustrations were made up. A small ½ in. flat wrench and screwdriver are left at each of the machines equipped with Mohr Lino-Saws so the ad operator can loosen the lock nuts and turn the set screws for each change when called upon to set indented news matter.

EQUIPMENT SALES

Matrix Contrast Sales

Recent purchasers of Black & White matrix contrast service include the St. Louis *Post-Dispatch* and the McKeesport (Pa.) *News;* Web Publishing Company, St. Paul; Plimpton Press, Norwood, Mass.; and Country Life Press, Garden City, N. Y.

Recent Linotype Installations

One or more Linotypes have been installed by the Pontiac (Mich.) *Daily Press;* Dun & Bradstreet, Inc., Brooklyn, N. Y.; Baer Printing Company, Lincoln, Neb.; San Angelo (Tex.) *Standard-Times;* Conneaut (O.) *Journal;* Lancaster (Pa.) *Intelligencer-Journal, New Era* and the *News;* Linotype Composition Company, Philadelphia; Matheus Printing Company, Milwaukee; Atlantic Union College, South Lancaster, Mass.; Corsicana (Tex.) *Sun* and the *Light;* Terry's Linotyping Company, New York; Joseph's Ludlow Service, Inc., New York; Sioux City (Ia.) *Journal;* Hamilton-Smith Typesetting Company, Pasadena, Calif.; Newport News (Va.) *Daily Press* and the *Times-Herald;* Harvard Crimson, Cambridge, Mass.; Harlan (Ky.) *Daily Enterprise;* Nashville (Tenn.) *Tennessean* and *Banner;* Nelson Print Shop, Spokane, Wash.; Monterey (Calif.) *Peninsula Herald;* Corinth (Miss.) *Journal;* A. L. Garber Company, Ashland, Ohio; S. Z Field Company, New Haven, Conn.; Walla Walla (Wash.) *Union-Bulletin;* Sullivan Bros., Printers, Lowell, Mass.

Exhibits and Trade Representatives

The printing equipment and supplies exhibits at the Buffalo A.N.P.A. Mechanical Conference on June 9, 10 and 11, will be located in Hotel Statler's Exhibition Hall on the seventeenth floor. Space has been laid out for 81 booths. As of March 28, Manager W. E. Wines stated that 63% of the booths have been assigned.

The policy governing admission of trade representatives to conference sessions will be the same as last year. Any manufacturing or supply company serving the newspaper printing industry may have two or more representatives attend the sessions. Companies planning to be represented are requested to send the names of their representatives to the A.N.P.A. Mechanical Dept., 370 Lexington Ave., New York, in advance of the conference opening date so that badges may be prepared. Advance preparation of the badges will relieve congestion at the registration desk.

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PAT. 2,207,999 IN COMB. WITH CUSHION CORK

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"CUSHION CORK" and "TINGUCORK" Blankets are both similar in appearance. They have two (2-ply) duck fabric surfaces for tremendous strength and freedom from creeping.

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Now makes it possible for pressroom operators to secure Superior Cork Packing in a wide range of gauges with the combined factors of DENSITY + RESILIENCY to compensate for plate irregularities or mechanical conditions.

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TELETYPESETTER
REG. U. S. PAT. OFFICE

STAR WHEEL

(Continued from Page 36)

ditions, a critical adjustment of the star wheel friction clutch is necessary.

Best results are obtained by using both the fiber faced friction disk and the adjusting device as described in this article, yet, the use of either the fiber faced disk or the adjusting device will improve the action of the old style friction clutch.

The regulation brass friction disk, if used without a lubricant of some kind between the disk and pinion often sets up abrasion and becomes scored. If a lubricant is used, and unless it is applied frequently, it becomes "gummy" and causes the star wheel to have an uneven or jerky action causing mats to "jiggle" or bounce from the assembling elevator. The fiber faced disk requires no lubricant, produces a smooth "velvety" friction and will run for months without further attention.

For the fiber faced disk *c*, an old scored brass friction disk may be used. The disk is accurately centered in a lathe, using a star wheel shaft as a mandrel and is faced off, leaving a 3/64 in. flange and a hub 3/8 in. diam. as shown at *c*, Fig. 2. A hard fiber washer is reamed to a pressed fit over the 3/8 in. hub and returned to the lathe and the washer is re-faced to a smooth finish.

The adjusting sleeve *h*, Fig. 2, is produced from 3/8 in. cold rolled steel 5/8 in. long, is accurately centered with a No. 29 drill and tapped 8x32 thread to fit over the star wheel shaft. An external thread 3/8 in. x 24 threads extends 7/16 in. from one end and a key way 3/32 in. wide, 3/32 in. deep is milled 7/16 in.

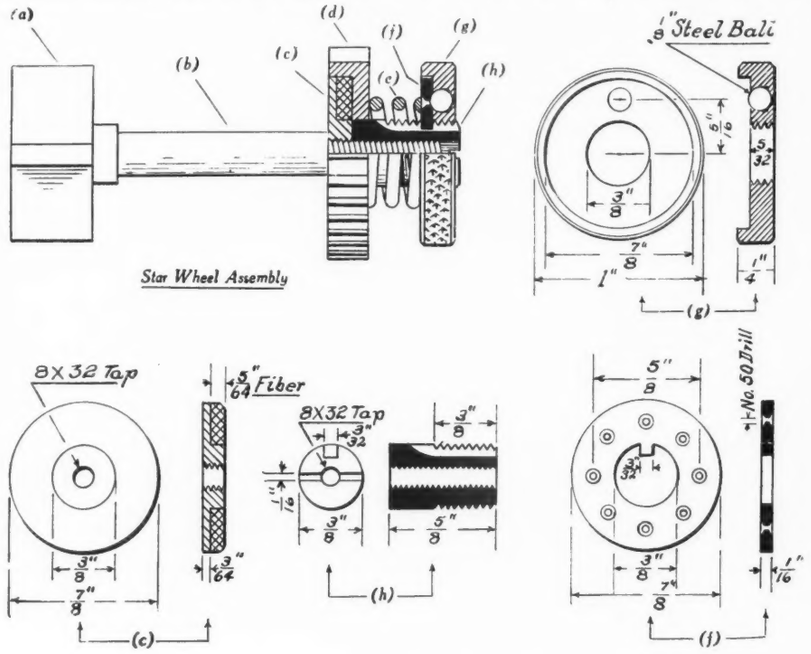

Fig. 2. — Diagrams show construction and dimensions of various parts employed in the Capps adjustable line-composing machine star wheel friction clutch. The star wheel a, *the shaft* b, *pinion* d *and spring* e, *all are standard stock parts; the standard brass disk* c (*which may be an old one*) *is recessed in a lathe to permit fitting on of a fibre facing shown at* cl *in Fig. 1. The sleeve* h, *ratchet disk* f *and adjusting nut* g *are all newly designed parts.*

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along the threaded end. A screwdriver slot also, is cut in the threaded end. This sleeve should be case hardened.

The ratchet disk *f* may be made from a 5/16 in. bolt washer 1/16 in. thick. The hole is reamed to 3/8 in. diam. and the periphery or rim is faced off to 7/8 in. diam. Eight holes are spaced equally around a circle of 5/16 in. radius from the center, drilled with a No. 50 twist drill and countersunk to 3/32 in. at an obtuse angle to fit over the projecting surface of the 1/8 in. steel ball. The point of a twist drill may be used as a countersink for this. A lug or "keeper" 3/32 wide to fit the key way in the adjusting sleeve is fastened inside the 3/8 in. hole by brazing or by any method the machinist may choose. The disk should be case hardened when finished.

Next is the adjusting nut *g*. This is made of machine steel 1 in. diam., 1/4 in. thick, counterbored 3/32 in. deep, 7/8 in. diam., to fit over the ratchet disk. The center is bored and threaded 3/8 in. x 24 threads to screw over the adjusting sleeve. A 1/8 in. hole, 5/16 in. from the center is drilled just deep enough to receive a 1/8 in. steel bearing ball, allowing it to project about 1/64 in. above the surface. After placing the ball in the hole, the rim of the hole should be swaged lightly around the ball to hold it firmly in place. The outer rim of the adjusting nut should be knurled.

The other parts shown in the drawing, the star wheel *a*, the star wheel shaft *b*, the star wheel shaft pinion *d* and the star wheel friction spring *e*, are standard stock parts.

Moves Main Office

To expedite the handling of orders, it has been announced by William C. Herrick Ink Co., Inc. that the main business office of the company was moved on March 25 to the factory at East Rutherford, New Jersey. It was stated in the company's announcement, however, that a sales office will be maintained at 47 West 34th Street (corner Broadway), New York, New York.

How to Adjust

WORK-UPS

By Wm. H. Lichter and Geo. F. Smalley

This 24-page booklet analyzes causes of work-ups and gives proper procedure for locking up forms.

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Clean Your Machinery FAST
With Breuer's Ball Bearing

TORNADO
Convertible Electric
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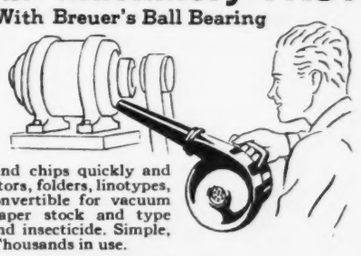

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For dependable stereotyping, rely on Certified Mats, Made in the U. S. A.

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MANUAL *of* STEREOTYPING

by JOSEPH D. GOGGIN

In this book, the author discusses the three primary factors in stereotyping — equipment, materials and manipulation. Since the stereotyping process largely is an Art and the results to be obtained in good plate-making are dependent upon the coordination of equipment, materials and manipulation, a reliable guide for securing this coordination is essential.

In preparing this book, the author has drawn upon his extensive practical experience and study in the Art. The all-important preparation of the form from which the mold is to be made and the molding and casting procedures are thoroughly discussed from the standpoint of the peculiar requirements of the process.

A Glossary and Encyclopedia gives definitions of terms used in the stereotype process. Bound in black cloth, gold stamped, 256 pages, size 5½ in. by 8 in. Price, $5, cash with order. Handling margin makes it necessary that cash accompany all orders for books.

PRINTING EQUIPMENT Engineer
1276 WEST THIRD STREET, CLEVELAND, OHIO

Loose Leaf Catalog

To supplement its branch sales organization, through mail order service, American Type Founders has issued the *ATF Printers Catalog*, a loose-leaf binder for which inserts will be supplied monthly covering the more important of the 4000 different equipment and supply items manufactured and distributed by the company. Binders for the catalog, which will eventually include information on composing room, pressroom and bindery equipment, are available to printers and lithographers without charge and may be secured either from the General Office of the company in Elizabeth, N. J., or from any branch.

Litho Course in Hartford

The Lithographic Technical Foundation, Inc., New York, in collaboration with the Advertising and Graphic Arts Trade Board of the Hartford Chamber of Commerce, has completed arrangements for a six-lecture course entitled *Science of Pressroom Procedure*, which opened in the Hartford Electric Light Building, Hartford, Conn., on Wednesday evening, March 26. Registration reached between 60 and 70, representing leading lithographic establishments throughout the Connecticut River Valley. Charles E. Latham, lithographic consultant, was the lecturer.

Principles of Metallic Traction

Principles of metallic traction, with explanatory curves and diagrams, are set forth in Manual No. 501 just released by Graham Transmissions, Inc. Included is a description of the reversing feature, available on some Graham variable speed transmissions, which delivers equal speeds forward or reverse (both sides of zero) without stopping or reversing the motor. Manual summarizes applications of various types of variable speed transmissions, and states when and when not to use a unit of the Graham type.

Copies of Manual No. 501 may be obtained by writing to Graham Transmissions, Inc., or in care of this magazine.

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Listed on page 5 may be secured through

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Liners	$1.00
Spacebands	.75
Distributor Box Bars	4.50
Second El. Bars	6.40
Back Jaws	10.00
Universal Molds	55.00

Large free catalog of other bargains. Free type gauges if you mention this advertisement.

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Made both from regular rubber and synthetic compounds to meet the requirements of plates for the high-speed printing of cardboard, cloth, wood and rough-textured papers. Special formulas for analine and linseed base inks. Ideal gums have high tensile strength, mold easily and are abrasive-resistant. Save on ink and make-ready time. For more brilliant colors and for flat tints that are smooth and even, use plates made from Ideal plate gums.

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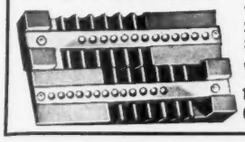

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For the finest results obtainable in all dry mat molding.

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Gauges ¼ in., 5/16 in. and 3/8 in. Each gauge supplied in Hard and Medium.

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for **ANY** *purpose,*
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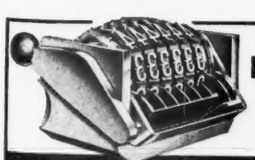

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ROTARY NUMBERING HEADS
for dependable, accurate numbering (right angle & parallel) at highest cylinder speeds

ALTAIR MACHINERY CORPORATION 55 VANDAM STREET NEW YORK CITY

NEW DEMANDS FOR MULTIPLE-CARBON RECORDS

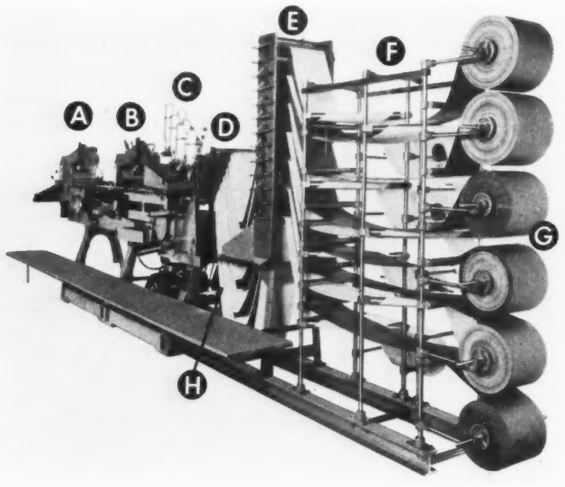
Increased business activity, resulting directly and indirectly from national defense work, has created an increased demand for multiple-carbon records, according to New Era Manufacturing Company. Two types of these records, which are known in the trade as unit sets, are widely used — the zig-zag folded type and the snap-outs. The former consist of a series of duplicate printed sheets, interleaved with carbon paper, zig-zag folded and delivered for use in a flat pile. These multiple sheets are fed into typewriters, billing machines and the like, as a continuous web, the operator tearing them off as they are removed from the machine.

The snap-outs, on the other hand, are manufactured as separate sets of duplicate sheets, interleaved with carbon paper, with one edge glued or stapled so that the sheets form a separate unit. By means of a perforated arrangement, the duplicate printed sheets and the carbon sheets are separated — after the typing or billing operation is finished — by simply grasping two edges of the assembled sheets and jerking them apart. The name "snap-outs" comes from the manner in which the carbon sheets are separated from the duplicate sheets.

Both zig-zag folded and snap-out sets are collated on the same machine. The printing is done on letterpress or offset printing equipment operating from a roll, and the collating may be done on New Era Collators.

The New Era Press and Collator print and collate as many as seven webs of printed forms, interleaved with carbon paper, a total of thirteen webs. Both zig-zag folded and snap-out sets, therefore, can be furnished with as many as seven printed sheets per set.

In the case of snap-outs, the sets of sheets are fastened together by either gumming or wire stitching. The Collators have been changed from time to time as different style forms have been designed and now are very flexible as to form sizes handled, punching, perforating, etc. Zig-zag folding can be done manually, at very high speeds, but for long runs the manufacturers recommend the automatic zig-zag folder. Average production of the New Era Collator depends upon the skill of the operator, number of forms, stock, etc., but it ordinarily runs to many thousands of unit sets per hour.



Rear view, New Era Collating Machine handling 7 paper rolls and 6 carbon rolls. **A** *is cut-off mechanism.* **B** *is combination punching head and perforator.* **C** *is gumming device. D is web guide and tension frame.* **E** *is constant-speed web unwind mechanism.* **F**, *seven rolls of paper. G, six carbon rolls.* **H** *represents web loops.*

Verner Moves

As of April 21, B. Verner & Company will be established in new quarters at 52 Duane St., New York, N. Y.

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Agency: Clifton Kirkpatrick, Chicago, Ill.

Vulcan Proofing Company 13
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Agency: O. S. Tyson & Company, Inc., New York, N. Y.

Wood Flong Corporation 41
Agency: St. George Advertising Agency, New York, N. Y.

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free TECHNICAL INFORMATION AND LITERATURE FOR *you*

Circle the numbers on the convenient postage-paid return card, supply your name, title and company address and mail — we do the rest. Manufacturer or supplier will send you information or literature about equipment or supplies advertised in this issue. This card saves you time and postage — Keep informed — No obligation.

Composing Room

1 **KEYBOARD ROLLER**—Get information on Booth's new Black Rubber Keyboard Rollers for line composing machines.

2 **TYPE CABINET** — For more complete information on Hamilton Type Cabinets with new Steel Shoe Cases, just circle this number.

3 **TYPE METAL**—Get the informative booklet, "Everyday Problems of Type Metal Users and Their Solutions."

4 **INTERTYPE** — Return the post card for new catalog explaining Intertype features.

5 **MATRIX CONTRAST**—"Prevents errors by lessening eyestrain." Return postcard for booklet.

6 **MONOTYPE**—Send for the "3 Way System," an informative booklet explaining the Monotype system.

7 **MOHR SAW**—For the complete story of the Mohr Saw, send for the booklet, "Short Cuts With Odd Measures."

8 **LUDLOW**—Return the post card for information regarding Ludlow composition and equipment.

9 **SAW TRIMMER**—Information on the features of the C & G Deluxe 3-A Saw Trimmer will be sent on receipt of your inquiry.

10 **LINOTYPE**—Get information on the operation of Blue Streak Linotypes. Circle this number.

11 **TELETYPESETTER**—will "show you how to increase the size and quality of your paper without increasing production costs."

12 **BAND SAW**—Get complete data on the new Economy Rouse Band Saw. Circle this number.

13 **METAL FEEDER**—Get information on the advantages and features of the Jordan Metal Feeder.

14 **PROOF PRESSES** — Vandercook will send you specifications of their presses for every kind of proofing.

15 **NUMBERING MACHINES**—Wetter offers you a unique booklet, "Numbering for Profit." Send for it.

16 **SLOW SPEED ASSEMBLER**—a device which Linotype Parts Company says "will modernize older Linotypes and Intertypes."

Pressroom

17 **ATF OFFSET** — Learn how many letterpress printers are "keeping extra business" with offset.

18 **PAPER**—Circle this number for samples of "the pressman's paper," Bryant Coated Papers.

19 **CUTTER KNIVES** — To get details of Coes Micro-Ground knives, send the post card.

20 **PAPER** — Get samples of Champion's high finished paper, Kromekote. Just circle this number on the post card.

21 **TWO COLOR ROTARY**—Send post card for full particulars on applications and specifications of the Cottrell Claybourn Rotary.

22 **NEWSPAPER PRESS**—If you wish complete specifications on Unitubular Presses, just circle this number and mail the post card.

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PRINTING EQUIPMENT Engineer April
1276 West Third Street, Cleveland, Ohio

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

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19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45

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KEEP UP-TO-DATE ON EQUIPMENT AND SUPPLIES

23 **INK**—Eagle Printing Ink Co. offers informative material on color and inks for every purpose.

24 **OFFSET**—Just circle this number and return the post card for bulletin on Harris LSQ Single Color Offset Press.

25 **NEWSPAPER PRESS**—R. Hoe & Co. will send you more details on "the record of Hoe anti-friction bearing" newspaper presses.

26 **INK**—Investigate Velo Cold Set Inks. Circle this number and return the post card.

27 **ROLLERS**—Get more information on Mercury Rollers and Press Blankets.

28 **INK**—Sinclair & Valentine will send a folder giving more complete details on Zephyr Blacks.

29 **PRESS BLANKETS**—For more information on Tingue press blankets for every use and purpose, circle this number.

30 **AUTOPASTER** — Get the facts on "how the Wood Autopaster will improve quality of newspaper printing and reduce waste as much as 50%."

31 **PRESS BLANKETS**—Circle this number for recommendations on the right Vulcan press blanket for your use.

Platemaking

32 **PAPER CUTTER** — Send for booklet giving details of Diamond Cutter with Table Light and Tape Magnifier.

33 **CATALOG**—American Publishers Supply offers its complete catalog of stereotype equipment and supplies.

34 **ZINC**—Atlantic Zinc Works will send the booklet, "Getting Down To Zinc Facts" and more information on Zomo Zinc and A-Z Alloy.

35 **DRYMAT**—Burgess will send samples of Burgess Chrome Mats for newspapers.

36 **ZINC**—Send the post card to get data on Edes products for photo-engraving.

37 **DRY MAT**—Certified offers an informative booklet on plate duplication with dry mats.

38 **EASYKASTER**—Specifications and complete information will be sent you. Just circle this number on the post card.

39 **ROUTING CUTTERS** — Get John Royle catalog 425 on the complete Royle line of routing cutters.

40 **MASTERFORMER** — Sta-Hi Corp. offers a descriptive booklet on the uses of Master Formers on producing, "better printing at lower costs."

41 **DRY MAT**—Circle this number for a sample lot of Wood Mats.

Miscellaneous

42 **KIMBLE ELECTRIC Company** offers a booklet on motors built for the printing industry.

43 **BEARINGS** — Get information from SKF on the bearing for your requirement.

44 **ELECTRIC TOOL**—Return post card for folder describing the Whiz Electric Tool.

45 **BEARINGS** — Send the post card for more information about Timken Tapered Roller Bearings.

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PRINTING EQUIPMENT *Engineer*

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The No. 325A Vandercook Proof Press prints 1000 proofs an hour. It is used extensively for printing advance proofs of page advertisements, finished proofs of jobs to be submitted for final OK, and for checking line-up and register on the smaller automatic press forms. Quality of printing equals that of production presses.

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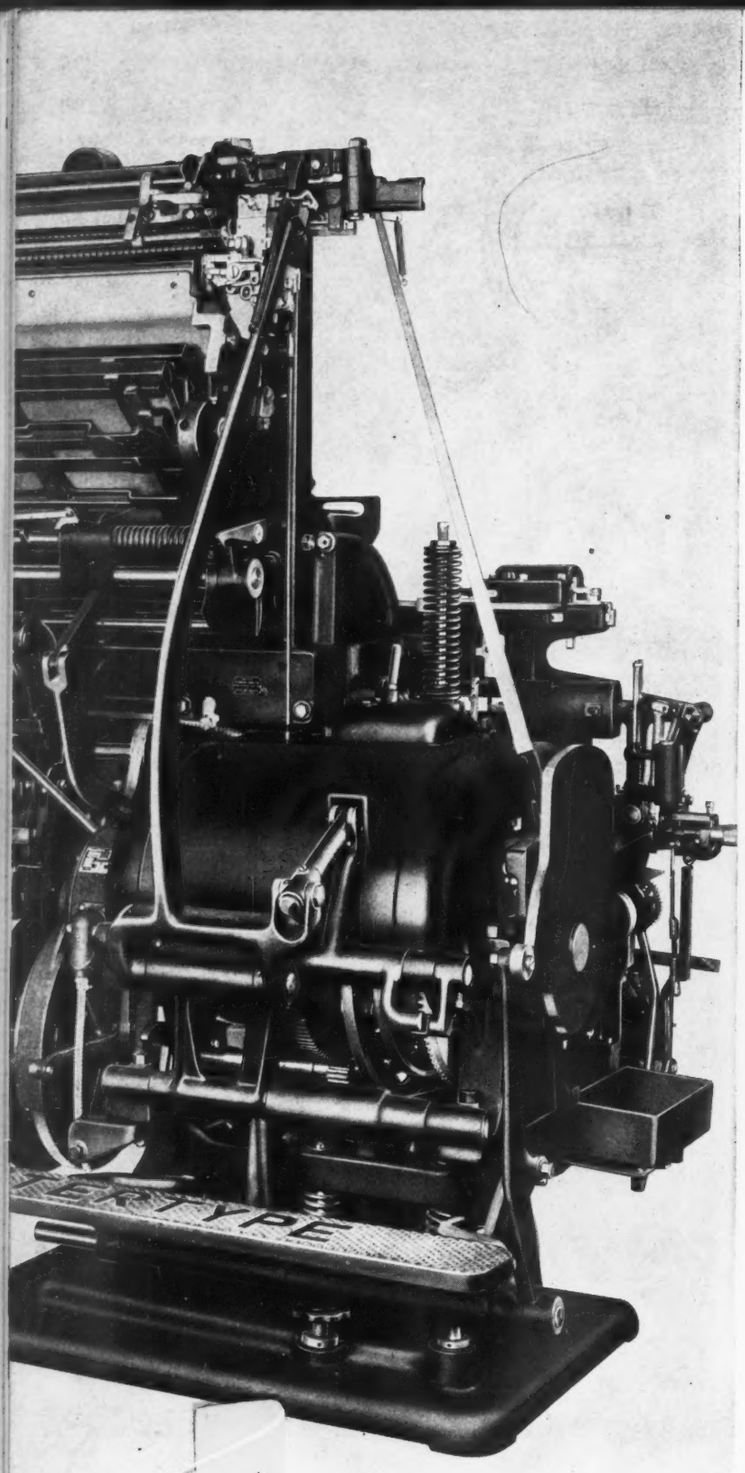

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